



JERSEY CITY 2021 CLIMATE AND ENERGY ACTION PLAN



C_{JERSEY}**ITY** MAKE IT *GREEN*



LETTER FROM THE MAYOR



In Jersey City, we have been a regional leader in the fight to protect our environment with bold and inclusive actions focusing on mitigating climate change, increasing resiliency, investing in a green economy, and ensuring equity. After over a year of public engagement that included more than 60 working group members, 15 steering committee members, and more than 200 community members, we are pleased to publish the *Jersey City Climate and Energy Action Plan*.

Since pioneering a resolution to fight climate change in 2015, we have been aggressive and progressive in addressing our environment's worst health offenders by building a robust bicycle and pedestrian infrastructure, switching our municipal fleet to fully electric vehicles (including the first electric garbage trucks on the entire East Coast), becoming the first in the state to ban plastic bags, among other important initiatives we have embraced to tackle the environmental realities of the 21st century.

Our administration is committed to reducing greenhouse gas emissions 80 percent by the year 2050, further aligning our goals with the broader vision of enacting real change for the benefit of our residents now and for generations to come. And we are going a step further: for Earth Day this year, Jersey City joined the United Nations' Race to Zero campaign, and we have pledged our commitment to becoming a carbon-neutral city by mid-century.

This Climate and Energy Action Plan will guide the city's forward motion toward a more resilient, sustainable city. Thank you for your commitment to joining our efforts in making a difference.

A handwritten signature in black ink, consisting of several overlapping loops and a trailing end, representing the signature of Mayor Steven M. Fulop.

Mayor Steven M. Fulop

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Special thanks to Moriah Kinberg, Matthew Kaplan, and Albert Padilla

ACRONYMS

1. **FTA:** Federal Transit Administration
2. **HCIA:** Hudson County Improvement Authority
3. **HUD:** U.S. Department of Housing and Urban Development
4. **IMT:** Institute for Market Transformation
5. **JC DPW:** Jersey City Department of Public Works
6. **JCEDC:** Jersey City Economic Development Corporation
7. **JC HHS:** Jersey City Department of Health and Human Services
8. **JCMUA:** Jersey City Municipal Utilities Authority
9. **JCRA:** Jersey City Redevelopment Agency
10. **NJ BPU:** New Jersey Board of Public Utilities
11. **NJCEP:** New Jersey Clean Energy Program
12. **NJDEP:** New Jersey Department of Environmental Protection
13. **NJEDA:** New Jersey Economic Development Authority
14. **NJTPA:** North Jersey Transportation Planning Authority
15. **PATH:** Port Authority Trans-Hudson
16. **PSE&G:** Public Service Enterprise Group
17. **PVSC:** Passaic Valley Sewerage Commission
18. **SID:** Special Improvement District
19. **ULI:** Urban Land Institute



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How Jersey City will

MAKE IT GREEN

HOW JERSEY CITY WILL **MAKE IT GREEN**



When Jersey City passed the pioneering Resolution to Fight Climate Change in 2015 (Resolution 15-485), our city committed to an 80 percent reduction in greenhouse gas emissions below 2015 levels by mid-century. This commitment is both ambitious and aligned with what the United Nations Framework Convention on Climate Change (UNFCCC) tells us will be needed to secure a world where global average temperatures rise no more than 2 degrees Celsius (3.6 degrees Fahrenheit). Beyond this threshold, the science points to catastrophic consequences—but Jersey City’s contribution to a warmer world is not set in stone. Our city can adjust to the changes we are already seeing while addressing social and economic struggles, ultimately realigning city planning and partnerships with a low-emissions world and prosperous, livable future for our residents.

Community support will be crucial to making these goals a reality. Jersey City went to work following the City’s climate resolution passing to uphold an additional commitment: Bringing as many voices to the table as possible to address climate action in ways that are both fair and achievable. Across five years, a series of public meetings, sign-ons to international campaigns, a community survey, and several moments of statewide climate leadership, Jersey City has heard from many of our residents—and those insights are what form the basis of the *Jersey City Climate and Energy Action Plan*.

HOW JERSEY CITY WILL **MAKE IT GREEN**

Based on community feedback and the data, here is what we know.

A vast majority of residents agreed that climate change is happening right now (86 percent of survey respondents) and that it poses a serious threat to people around the world (96 percent). However, a smaller number of residents felt they completely understand the science. Despite those high numbers, only a smaller number of residents felt they completely understand the science behind climate change (49 percent). We paired the results of our public input with data-driven approaches, including a climate vulnerability assessment and creating a greenhouse gas inventory to quantify community-wide emissions in 2019. Finally, we modeled climate action scenarios as part of this plan to show us the measures that show the most promise for helping us reach our goals. We have included select survey responses throughout the report. Look for the “Survey Says” boxes to hear directly what residents told us.

Jersey City is already experiencing climate change and its impacts. As a dense urban area and coastal community, Jersey City is particularly vulnerable to the impacts of a changing climate. Jersey City has already experienced these effects locally in the form of extreme weather events, such as Hurricanes Irene and Sandy, which caused power outages, severe flooding, and property damage, which resulted in millions of dollars in losses to the city’s local economy. (Page 36)

Our most vulnerable people will be most impacted. The impacts of these climate risks are projected to increase and it is a hard reality to know that those members of our community who already are the most vulnerable are likely to also

be the ones most affected by climate change. That is why a commitment to equity is at the core of this plan (Page 20).

Jersey City contributes to climate change primarily by powering our built environment, which constitutes two-thirds of our community’s total greenhouse gas emissions, and from transportation, which accounts for about another third. Together, these sources contributed about 2.9 million metric tons of carbon dioxide-equivalent emissions in 2016, the most recent year data was available (Page 32). Moreover, if a business-as-usual approach to energy consumption continues, Jersey City’s emissions are projected to rise 30 percent by 2050. These insights create a picture that is not altogether surprising: We will need to implement significant changes to cut our community emissions, particularly for buildings and transportation, in order to reach the levels needed to meet our climate commitments.

Jersey City has tremendous potential as a regional leader to address the intergenerational concerns that the global climate crisis poses. As a mid-sized Northeastern city — and the second most populous city in New Jersey — with a rich history and growing connections to the international community, what we do here matters to our neighbors and serves as a model for cities like ours around the world. This is why our city has joined international leadership initiatives, including the Global Covenant of Mayors for Climate and Energy, and networks, such as ICLEI-Local Governments for Sustainability and Climate Mayors, to help us meet the call to action. And while we do this work *with* partners, sharing best practices globally, we take climate actions *for* our community members, acting locally.

These are tough challenges, but also provide our community with significant leadership opportunities if we take climate action seriously. The *Jersey City Climate and Energy Action Plan* serves as more than a catalog of potential measures to lower emissions. It represents our community’s commitment to knowing what the science is telling us about climate impacts. It is our call to acting better on behalf of those most vulnerable and to position Jersey City for prosperity in the face of adversity. And it is our pledge to leading in ways that inspire municipalities throughout the state.

Vision and Goal

80% by 2050

OUR GOAL IS TO REDUCE

GREENHOUSE GAS

E M I S S I O N S

80 PERCENT

BELOW A 2015 BASELINE

BY THE YEAR 2050,

A TARGET IN LINE WITH THE

STATE OF NEW JERSEY’S.

An aerial photograph of a university campus, overlaid with a semi-transparent teal filter. The image shows various campus buildings, including a prominent tower with a blue roof, a large dome structure, and a parking lot. In the foreground, there is a marina with several sailboats. The text is centered over the image.

Purpose, Scope and Process Behind the

CLIMATE AND ENERGY
ACTION PLAN

PURPOSE, SCOPE AND PROCESS BEHIND THE CLIMATE AND ENERGY ACTION PLAN

The Jersey City Climate and Energy Action Plan is grounded in widely accepted science. Developed with consideration to the 2014 Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report (AR5), which was written by a panel of hundreds of climate experts and scientists and approved by a team of external reviewers, this plan is built with the unambiguous knowledge that anthropogenic greenhouse gas emissions are causing global climate change. This consensus is what moved Jersey City to adopt Resolution 15-485 in 2015 to affirm the City's support to the Paris Agreement in 2017. Jersey City recognizes the risk that climate change poses to our residents and is acting now to reduce climate-warming greenhouse gas emissions of both our government operations and community-wide. We will do this through the existing and new programs presented in this plan.

At the same time, we recognize that climate impacts are a present reality and that frontline communities are disproportionately affected by this reality. For these reasons, the scope of the plan spans three pillars of integrated climate action: mitigation, adaptation and equity. This tried-and-tested process, outlined below, has been used by hundreds of communities and draws on national and international best practices as a means to address climate change in Jersey City while at the same time engaging in a global conversation fit to tackle a global challenge.

What is a climate action plan?

A climate action plan is a strategic framework for reducing greenhouse gas emissions and responding to the impacts that climate change will have on a community. The plan conveys both the overarching vision and a detailed roadmap to guide local efforts. The measures here take advantage of both common-sense approaches and cutting-edge policies that our local government is uniquely positioned to implement — actions that can reduce energy use and waste, create local jobs, improve air quality, preserve our local landscape and history, reduce risk to people and property, and in many other ways benefit Jersey City for years to come.

The *Jersey City Climate and Energy Action Plan* gives our community a framework to document, coordinate, measure, and adapt efforts moving forward. Moving beyond listing actions, this plan discusses how each action will be implemented via a timeline, financing mechanism where identified, and assignment of responsibility to departments or community stakeholders. The Plan calls out the co-benefits of each action where known.

By creating a clear course of action, everyone can have a role in creating and achieving climate and sustainability goals, and the *Climate and Energy Action Plan* will drive our local commitment toward a clear and measurable outcome.

COMMUNITY VOICES



Albert Padilla

K-8 Science Supervisor at Jersey City Public Schools

Member of Jersey City Climate Action Steering Committee

"The role of youth is extremely important," says Albert Padilla, K-8 Science Supervisor at Jersey City Public Schools and a Member of the Jersey City Climate Action Steering Committee. "Our role now is to lay that groundwork for them, so that the problems are not insurmountable for them to fix." Padilla points to New Jersey's mandate at the state level for climate change to be incorporated into school curriculum as an important step. Jersey City is ahead of the game: Jersey City Public Schools has partnered with the City's Sustainability Office to deliver innovative science, technology, engineering, arts and mathematics (STEAM) education opportunities through the annual Sustainability STEAM Challenge.

In the first year, students were given a problem-based learning task to develop action plans for measures that they believed would improve their neighborhoods. "Experts judged them during a 'Shark Tank'-style event at City Hall," Padilla explains. Another challenge had K-2 students create a reusable bag design. When Kate Lawrence, the City's Sustainability Director, took an electric fleet vehicle around to public schools, it gave many students their first viewing of an EV. Padilla counts community awareness and parent involvement among the climate education wins. But what is the biggest success? "That has been to amplify student voices," he says. "They will inherit an earth that is a lot different than when we were growing up—to instill an 'agent of change' attitude will empower them to take ownership moving forward."

SCOPE

The plan is presented as a standalone document that aligns with several other city planning processes. These include: *Jersey City Adaptation Master Plan, Jersey City Urban Environmental Green Infrastructure Plan, Jersey City Tree Canopy Assessment, Jersey City Master Plan, Let's Ride JC Bicycle Master Plan, Jersey City Vision Zero Action Plan, and Jersey City Pedestrian Enhancement Plan.*

In addition to activities aimed at lowering emissions, climate adaptation and considerations for equity in planning are considered among the pillars of the best climate action plans. The *Jersey City Climate and Energy Action Plan* adopts this three-pillars approach to integrated climate planning. The focus areas outlined below are categorized in the plan based on sectoral action areas: energy, transportation and land use, and waste. However, we recognize that consideration of measures by sector is only one way to think about climate action. Each measure invariably will also address one or several pillars of integrated climate action and this is why we identify known co-benefits. Finally, an overarching focus of the *Jersey City Climate and Energy Plan* is to align with the *State of New Jersey's Energy Master Plan*. Jersey City is a major city in the State, but not the only one, and collaboration regionally will be important to reaching our goals.

Reduce greenhouse gas emissions.

This plan covers objectives and strategies for reducing GHG emissions resulting from local government and community-wide activities

within Jersey City. Although many available measures are outlined in the Action tables beginning on Page 42, several focus areas are highlighted. These focus areas were selected based on a number of criteria: 1) their feasibility to be implemented together as a joint process between the City and community members, 2) their potential to achieve meaningful greenhouse gas reductions, and 3) their ability to target a primary source of GHG emissions, namely from the energy and transportation sectors:

- **Reduce energy usage** and carbon emissions in new and existing homes, multi-family buildings, commercial, and industrial buildings.
- **Improve access to clean and/or renewable energy sources** in residential, commercial, and industrial buildings.
- **Demonstrate leadership in energy efficiency** and green building through facilities, equipment, and operations of Jersey City public agencies.
- **Decrease total per-capita vehicle miles traveled (VMT)** through urban infrastructure and development choices, including by pursuing transit-oriented and mixed-use development that promotes active transportation options and reduces overall carbon emissions.
- **Adopt a holistic waste-management strategy** to reduce greenhouse gas emissions from waste produced by municipal operations and

the community, including through reuse and reduction programs and increasing recycling rates across the City.

The plan creates a framework to document, coordinate, measure, and adapt efforts moving forward. In addition to listing actions, the plan discusses how each action will be implemented via timelines, financing, and assignment of responsibilities to departments, staff, or community partners when identified.

Adapt to climate change and build community resilience.

In addition to addressing mitigation concerns, the plan also incorporates the vulnerability of our city to climate hazards and the strategies proposed to respond to these vulnerabilities and increase resilience. An adaptation framework is provided to develop and implement actions to reduce risk of climate impacts to Jersey City's resources and infrastructure, as well as increase social and economic resilience of the system. It is important to recognize that reducing climate-related risk is a far more complex undertaking than



Select climate action community survey results are included throughout this report. Look for these boxes to hear what residents told us.

SCOPE

reducing climate change-causing emissions, as these challenges are interconnected with inequitable systems of economy, healthcare, education, transit, and others. Ultimately, no one strategy will undo these challenges, but the implementation of multifaceted strategies may set Jersey City on the right path.

- **Increase resiliency of Jersey City** to future storm events and sea level rise.
- **Support infrastructure and behavior changes** needed to transition to lower carbon and climate-resilient transportation choices.
- **Expand and improve bicycle and pedestrian facilities**, connectivity, convenience, and safety in order to significantly increase the % of trips taken by walking or biking.
- **Reduce the heat island effect** throughout the city.

Ensure solutions are implemented equitably.

The Jersey City Office of Sustainability believes community involvement is key not only when developing this plan but especially for successfully implementing the actions within it. Equity and inclusion concepts and components are interwoven throughout the sections and formed the foundation of our public outreach activities over the past year and a half. Low-income populations, communities of color, people with disabilities, elders, refugees and immigrants, and other frontline communities often bear the brunt of climate impacts without the necessary infrastructure and support systems to respond — and often without gaining any of the benefits of a clean and sustainable future unless safeguards are put in place.¹ Creating a resilient Jersey City means addressing the socioeconomic inequalities that cause disparities in access and outcomes. For these reasons, the plan will focus on a number of areas of climate equity.

- **Increase existing training programs** and institute new training programs to ensure existence of diverse, skilled clean energy workforce
- **Work with the Jersey City Diversity & Inclusion Advisory Board to develop an Equity Assessment Tool to guide the development and implementation of climate-related plans and policies.**
- **Focus engagement and outreach** on underrepresented and under-served communities

¹“Populations of Concern”. Climate and Health Assessment. U.S. Global Change Research Program, 2020: <https://health2016.globalchange.gov/populations-concern>.

PROCESS

The work that went into developing the Jersey City Climate and Energy Action Plan

spanned

16 months

involved over

200 community members

including

15 steering committee members

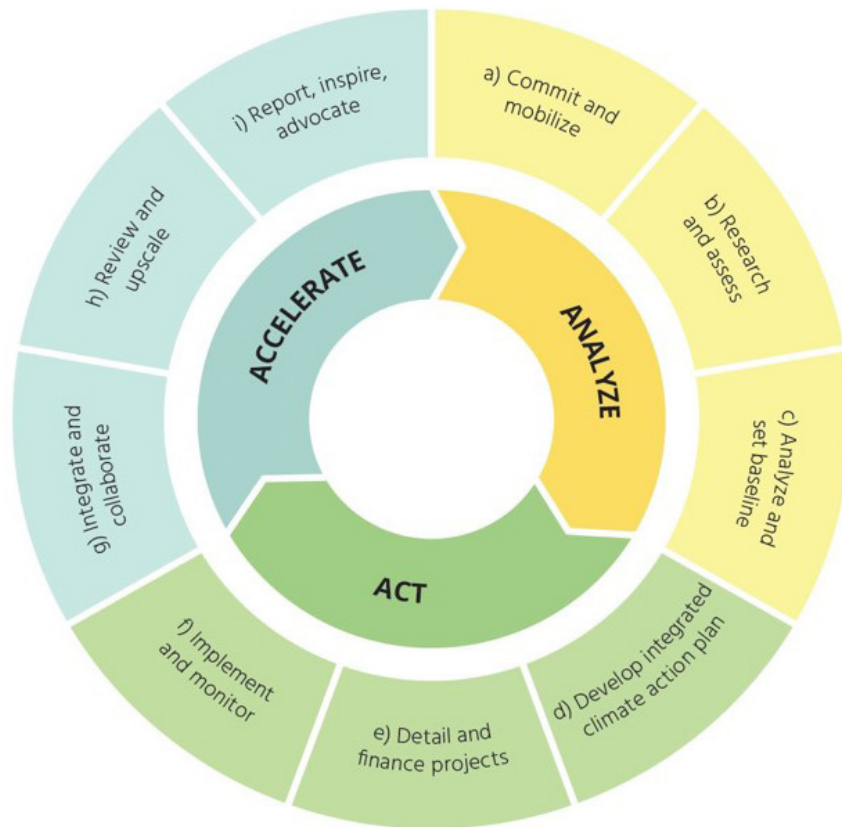
and

66 working group members...

...and can be distilled into a framework for integrated climate action.



PROCESS



The full-cycle process follows a stepwise approach involving **collecting and analysis of climate data, action and implementation, and leadership and sharing while standing on the pillars of mitigation, adaptation and equity**. More than 600 communities in the United States have followed this basic framework, articulated most frequently through ICLEI’s Five Milestones for Emissions Management and more recently interpreted through a streamlined Analyze-Act-Accelerate model.

Analyze

Jersey’s City’s process began with a leadership: City Council passed a resolution in support of the Paris Agreement in 2015. In 2018, Mayor Fulop committed to joining the Global Covenant of Mayors for Climate & Energy. In 2019 the Office of Sustainability completed Jersey City’s first-ever city-wide greenhouse gas emissions inventory to understand where the City’s emissions came from. A municipal greenhouse gas inventory was completed in 2020. From there, the City set an emission-reduction target that explicitly aligns with *New Jersey’s Global Warming Response Act 80x50 Report* released in 2020 and takes into account the level of ambition needed to meet the goals of the Paris Agreement.

Act

The *Jersey City Climate and Energy Action Plan*, as a planning process and foundational document, sits squarely within the Act phase of the process. Built out of the data analysis and leadership commitments that precede this phase, developing the plan was driven by community input. In the of fall 2019 the City convened a Climate Action Steering Committee to shape the direction of the *Climate and Energy Action Plan* and related outreach activities. On November 7, 2019, Jersey City held the first public meeting for the *Climate and Energy Action Plan*. Forty community members attended to learn about climate change in Jersey City and the development of the City’s first Climate Action Plan. Members of the public were invited to join working groups to develop the action items and strategies that would make up the plan. Three working groups focused on each of the major greenhouse gas emissions sectors: Energy, Transportation & Land

ICLEI’s GreenClimateCities framework for integrated climate action planning stands on three pillars of climate mitigation, adaptation, and equity. Source: ICLEI

PROCESS

Use, and Waste. A fourth group, Equity & Outreach, was created to maximize benefits and reduce barriers for communities of color and low-income populations. These working groups met several times over many months to draft the action items contained in the plan. The second round of public outreach kicked off March 3, 2020, at Congregation B'nai Jacob on West Side Avenue with a workshop including large posters displaying the proposed action items. The activity gathered feedback on these draft action items. Although the second round of public engagement was unfortunately cut short by the Covid-19 pandemic, the results of this meeting, combined with the results of the first and second community surveys, allowed the team to identify action items that were a priority for the community. Those prioritized actions were then modeled for their emissions-reduction potential and are considered in this plan alongside other factors that ultimately determine their feasibility: cost, capacity to carry out, and co-benefits to the community.

Accelerate

For our community to thrive in the face of the many tough challenges that climate change presents, we need to consider our plan much more than a document — but rather a call heard across government departments, heeded by business owners and our higher education institutions, and heralded by the voices of youth, homeowners and other residents. This also means working with partners at regional and state levels, and connecting to cities around the country and world. This is what accelerating action means: It

is a recognition that Jersey City has jurisdictional authority to ensure that our community is prepared for the impacts of a warmer, wetter world, but that a global challenge requires the City to be a leader and open to learning at the same time. Finding the finance to implement our plan and fostering the partnerships for them to be successful will be the central focus of where we go from here.

WHO IS ICLEI?

ICLEI – Local Governments for Sustainability is a global network working with more than 2500 local and regional governments committed to sustainable urban development. Active in 125+ countries, they influence sustainability policy and drive local action for low emission, nature-based, equitable, resilient and circular development.



Compost Drop-Off at Brunswick Community Garden. Photo credit to **photo contest winner: Becky Gilman**

A photograph of a group of people, including adults and children, swimming in a pool. The image is overlaid with a semi-transparent blue filter. The text "OUR COMMUNITY" is written in white, uppercase, sans-serif font across the center of the image. The background shows several people in the water, some holding children, suggesting a family-friendly community activity.

OUR COMMUNITY

OUR COMMUNITY

Jersey City is the second largest city in New Jersey with 261,746 people.² Sitting between the Hackensack River and Newark Bay to the west, and the Hudson River and Upper New York Bay to the east, our 14.79-square-mile city has more than 21 miles of waterfront along these rivers and bays. The footprint and population also make it one of the most densely populated cities in the United States, with 16 or more dwelling units per acre in the downtown. Many of our residents live along the spine or the center of Jersey City, a result of historical use of the City's waterfront for port activity and, more recently, for open and recreational space that is publicly accessible.

Economic shifts

Development in Jersey City historically concentrated along the rivers and bays and the City had extensive industrial and manufacturing operations. Beginning in the 1980s, Jersey City began to transform from an industrial city into the modern growing city that it is today. Population is projected to grow to 356,000 residents by 2040.³ Dense urban development makes up the fabric of the city's building stock, which includes residential, mixed-use, commercial, and industrial buildings. Jersey City's median household income rose by 15 percent from 2000 to 2018. However, the percentage of residents living in poverty remained roughly the same. As of 2018, an estimated 18 percent of the population lives below the poverty level. Moreover, 38 percent of Jersey City households do not have a vehicle. It is therefore essential that public transportation methods be available. Today, Jersey City is home to more than 20,000 businesses, large and small and hosts commercial areas, including Journal Square, Exchange Place, Newport, Newark Avenue Downtown, Communipaw Avenue, MLK Drive, Newport Mall, and Route 440.



"Make a compulsory environmental education programme for all school-aged children—they are going to inherit the consequences after all."

A geography susceptible to change

The geographic location of Jersey City puts it at greater risk of climatic changes; our bi-coastal geography makes the City particularly vulnerable to future sea level rise and coastal storms. Additionally, areas along tidal waterways in New Jersey are already experiencing higher than average rates of sea level rise. Not only will Jersey City have to do its part in mitigating current climatic conditions, the City will have to adapt to these foreseeable changes in order to thrive in future conditions.⁴

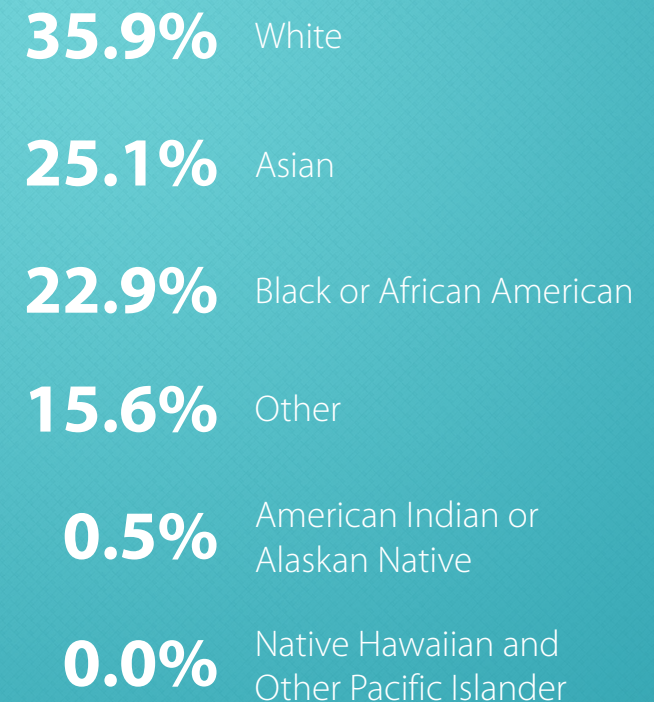
²American Community Survey (2014-2018 5-Year Estimates).

³Appendix A. NJTPA Regional Transportation Plan.

⁴Resilient Jersey City Plan, 2019.

Vibrant ethnic and cultural diversity.

Jersey City has a rich cultural diversity and heterogeneous population, and is often ranked in the top-position of studies that measure ethno-racial, linguistic, and birthplace diversity. Census estimates from 2019 indicate that foreign-born people make up over 40 percent of our community's population, and 53% of respondents speak a language other than or in addition to English at home. In fact, within a 30,000-student Jersey City schools system, there are more than 40 first languages, from Spanish, Mandarin, and Vietnamese, to Wolof (West Africa) and Abkhaz (Caucasus). Overall, the City's residents identify as:

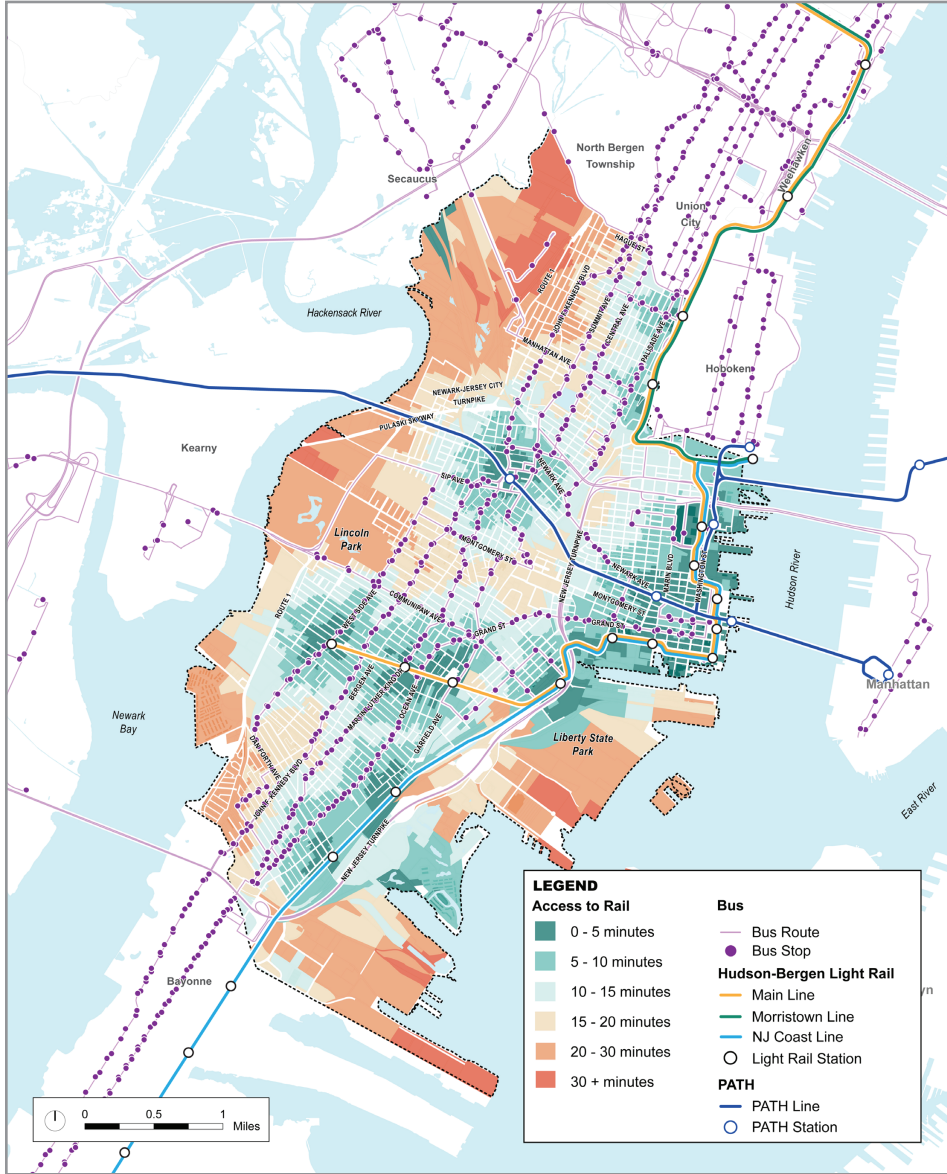


Source: 2019 American Community Survey 5-year estimates.

OUR COMMUNITY

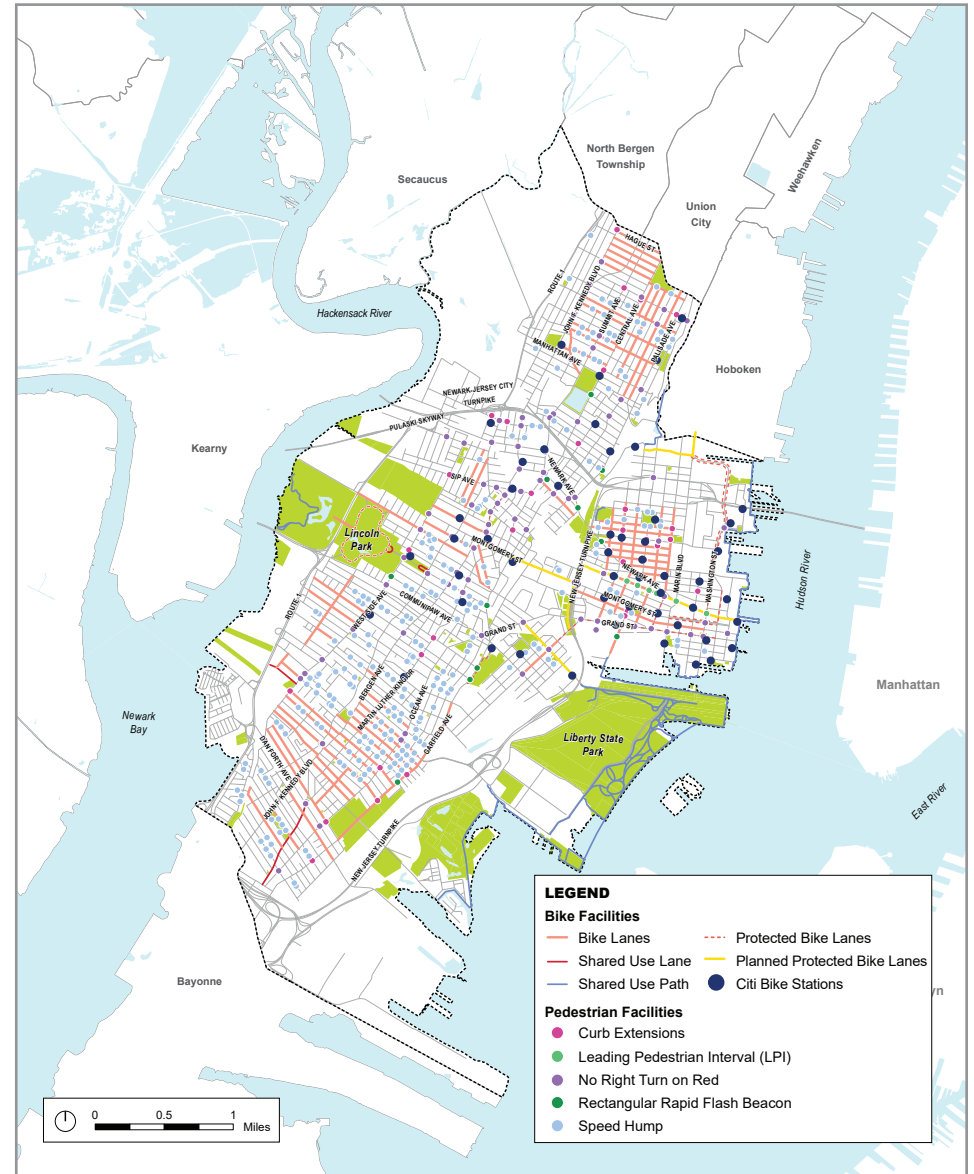


Access to light rail and subways



Maps by BfJ Planning, as part of the 2021 Jersey City Master Plan process

Existing pedestrian and bicycle facilities

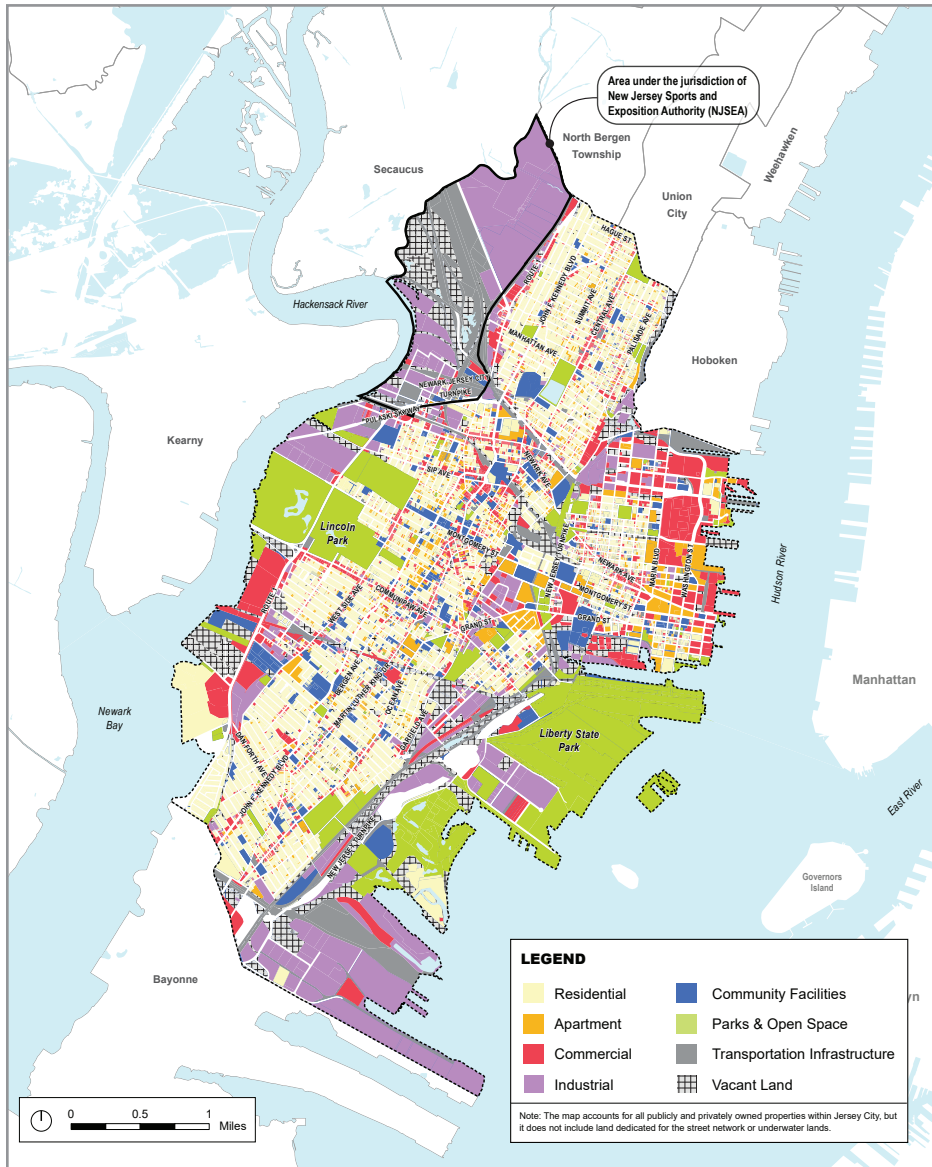


Maps by BfJ Planning, as part of the 2021 Jersey City Master Plan process



OUR COMMUNITY

Land use in Jersey City



Maps by BFJ Planning, as part of the 2021 Jersey City Master Plan process

COMMUNITY VOICES



Moriah Kinberg

Community Outreach Manager, New Jersey Future

Member Jersey City Climate Action Steering Committee

“Policy is necessary, but the action does not get done unless a city has good champions,” says Moriah Kinberg. As a member of Jersey City’s Climate Action Steering Committee, Kinberg is one of those champions, serving as a voice advocating for the city to keep equity front and center in its response to climate change. Her background in conducting outreach for thriving communities at the state level helps her understand the interlinkages between climate and economy.

Kinberg believes that the Steering Committee was instrumental to defining which action items in the climate action plan would be priorities. “We served an advisory role for every step of the process,” she says and feels confident that the planning effort was community-driven. For example, she references the resident surveys, saying that these guided the Steering Committee to prioritize which Action Items are prioritized in the plan. Yet, she would like to see more focus on preparing for the climate impacts felt here and now as part of any future work—and for people to remain central. “We cannot only do the work, but need to make sure the work is equitable,” she says. “Having community members take on issues and be champions is what will make the residents’ vision a reality.”

CLIMATE EQUITY IN JERSEY CITY



While climate change affects all, everyone is not affected in the same way. Frontline communities bear the brunt of climate impacts because of their disproportionate vulnerability to extreme heat, storms, and access to resiliency services. They may also be more susceptible to vector-borne illnesses, cardiovascular and respiratory illnesses associated with pollution, anxiety, depression, and other mental illness. The reasons that vulnerability is heightened among

certain community members are many and addressing them will require simultaneously addressing social equity considerations that are often thought about outside of a climate context. However, because we know lower-income

 **SURVEY SAYS!**

“Create a community garden program that connects members with spaces to grow edible plants and have the parks department help maintain and distribute community grown food”

communities and communities of color are disproportionately impacted by climate change, climate action planning and social equity are inextricably linked.⁵ Whether explicit or inadvertent, these populations have been historically and systemically excluded from climate-related policy and funding decisions.

Recognizing three dimensions of social equity. Breaking down the concept of equity into easy-to-comprehend dimensions helps to communicate about social equity with various stakeholders, mainstream equity thinking into government and community processes, and ensure municipal programs are designed to increase equity across the city. Recognizing the need for readily accessible language surrounding climate equity, a number of communities have oriented these considerations along three dimensions, including access, participation and opportunity:⁶



Access. Local governments seek to ensure more equal access to public services and infrastructures for all local residents – independent of factors like age, neighborhood, income, social group or language.



Participation. The more programs are designed with rather than for residents, including all voices across the city and involving those affected early on, the more they meet local needs and generate long-term impacts.



Opportunity. To offer fair perspectives for all, local governments are targeting 1) improved access to quality education for all, 2) provision of career perspectives and 3) increased diversity in employment.

Cities including Newark, Baltimore, and Buffalo have also recognized these dimensions as useful in their work, particularly around transitioning

from a post-industrial legacy economy to a green workforce economy. These are by no means mutually exclusive – very often, programs succeed best when all three aspects are considered early on. Working on the social equity dimensions will strengthen local communities because it 1) ensures physical infrastructures and services benefit all, 2) gives a voice to everyone and sends the message that everyone matters and 3) provides opportunities for all to contribute to the community in meaningful ways.

Prioritizing frontline communities. To ensure that climate action is as equitable as possible in our community, the Jersey City Climate and Energy Action Plan prioritizes decision-making around those for whom life outcomes are disproportionately affected by structures in society. With consideration to the access-participation-opportunity dimensions, the frontline community members prioritized by the **Steering Committee and Equity Working Group include:**⁷

- People of color
- Poor and low-income residents
- Youth
- The elderly
- “New Americans” or recently-arrived immigrants
- Individuals with limited English proficiency
- People with disabilities
- The homeless

The climate actions in this plan were designed

⁵“A Guide to Equitable, Community-Driven Climate Preparedness Planning,” Urban Sustainability Director’s Network (2017).

⁶Dimensions to Advance Social Equity in Sustainability Planning. Urban Transitions Alliance. ICLEI, 2020.

⁷“Preparing for the Regional Health Impacts of Climate Change in the United States,” Centers for Disease Control and Prevention (2020).

CLIMATE EQUITY IN **JERSEY CITY**

to maximize benefits and minimize burdens for those communities facing the greatest climate-related risks. The Equity and Outreach Working Group assessed each action item based on equity considerations developed for the Climate and Energy Action Plan.

In addition to feedback from the community survey, the Energy, Transportation, and Waste Working Groups were also asked to provide input on the items. Staff then incorporated these changes based on the equity assessment and other feedback.

Establishing climate equity objectives

The climate equity objectives reflect the equity-related feedback received from the Climate Action Steering Committee and Working Group. These four objectives were then incorporated into the action items.

- 1. Improve energy security** and affordable access to clean energy while minimizing displacement
- 2. Increase access to active transportation**, such as walking and bicycling, and public transit options that are affordable and low or zero-emission
- 3. Expand and improve access** to parks and public green spaces
- 4. Reduce the risks and impacts** of air pollution, flooding, and extreme heat

The participation and opportunity dimensions drove the process for selecting these objectives: Both the involvement of residents in the process and the engagement of underrepresented voices to ensure no one is left behind. The more programs are designed with rather than for residents, involving those affected early-on,

the more they meet local needs and generate long-term impacts. See Page 42 onward for our Implementation Strategy for how participation will drive the doing behind the thinking in Jersey City's plan.

Assessing climate vulnerability

Inequity correlates with greater vulnerability to physical challenges, making many in Jersey City disproportionately at risk from natural disasters and the impacts of climate change. The City's 2017 Resilient Master Plan revealed that the elderly and child populations are particularly vulnerable, alongside families with a lower income and communities with significant non-English speaking ability, which find disaster and evacuation information inaccessible. In terms of physical vulnerability, 42.1 percent of critical facilities fall within the FEMA disaster flooding zones, while an additional 31.5 percent have an annual risk of flooding. Meanwhile, the Adaptation Master Plan projected sea level rise and storm surge on one percent annual chance flood hazard areas and identified 27 potential coastal protection measures that would mitigate storm surge. Across these joint planning efforts, issues of vulnerability were discovered to often come down to the access dimension: Depending on factors like age, neighborhood, income, social groups and language among others, not all residents have the same access to public services and infrastructures. To ensure that no individual or group in the city is excluded or left behind, local governments can strengthen inclusive access by considering affordability, the variation of needs between priority groups, understanding of the barriers to access and contact points for support.

COMMUNITY VOICES



Matthew Kaplan

Co-Founder & CEO at ReVireo

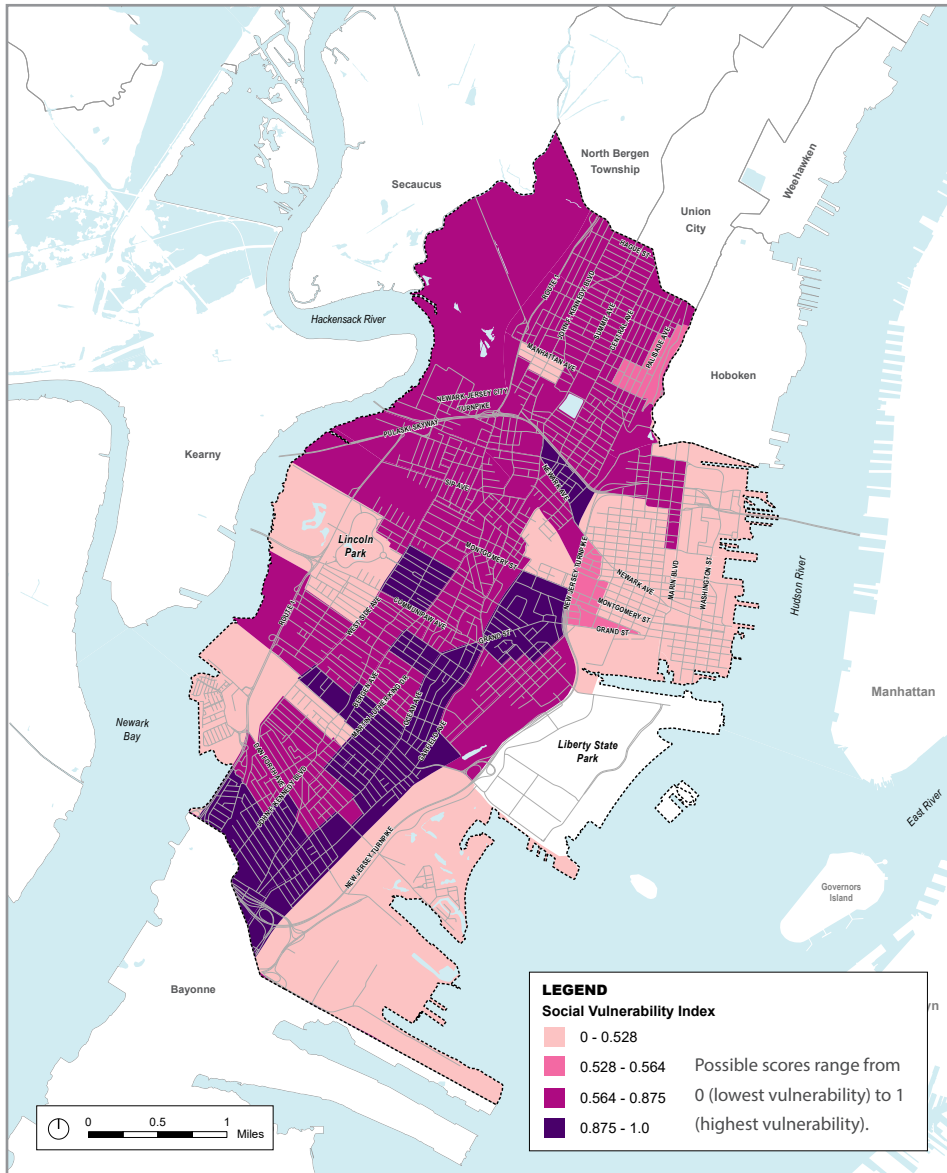
Member of Jersey City Climate Action Energy Working Group

"Community solar and access to renewable energy are where social equity can really overlap with carbon reduction," says Matthew Kaplan, member of the City's Energy Working Group. Kaplan joined a diverse group of subject matter experts—from U.S. Green Building Council representatives to the former Mayor of Hoboken—to inform which energy-related strategies were prioritized in the *Jersey City Climate and Energy Action Plan*. He brings experience in green building to the group, having founded a company 11 years ago that helps building owners to reduce carbon emissions.

Kaplan believes that equity was successfully woven throughout the group's conversations and that community solar is among the most immediate opportunities to act on. Still, he knows there is more work that needs to be done to ensure opportunities reach community and faith-based organizations, such as translating communications into multiple languages. He is excited about the possibilities to launch training programs, such as with trade schools and trade unions, to prepare a new generation of energy auditors and solar installers. "Buildings contribute the largest portion of GHG emissions, so we needed ambitious goals."

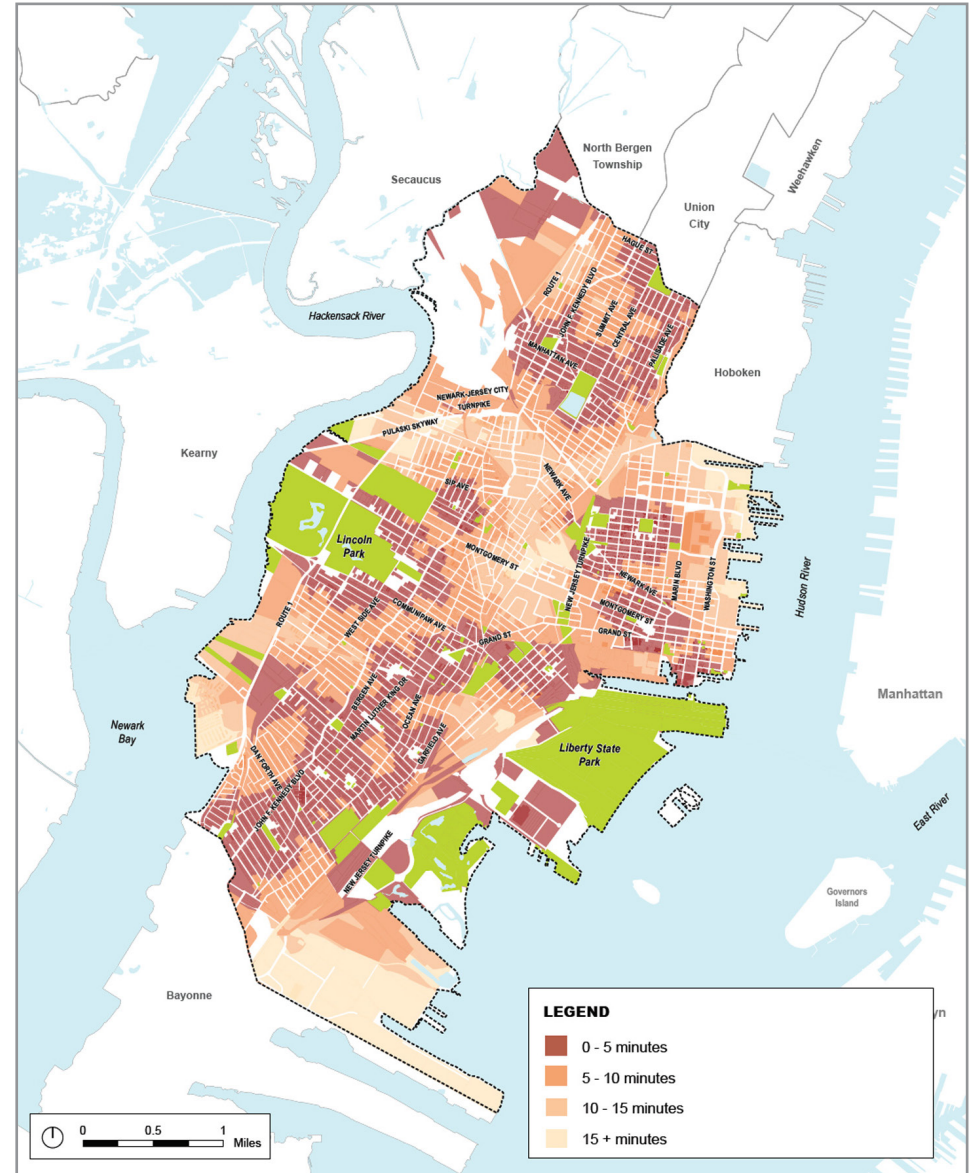
CLIMATE EQUITY IN JERSEY CITY

Social vulnerability index



Maps by BFJ Planning, as part of the 2021 Jersey City Master Plan process

Accessibility to parks and open space in Jersey City



Maps by BFJ Planning, as part of the 2021 Jersey City Master Plan process

A HISTORY OF RAISING CLIMATE AMBITION



Jersey City's climate action tells a story.

This section presents notable milestones in our community's climate journey presented in a timeline. People form the heart of this journey, while plans and policies form a backbone for increasing action. Some of the most noteworthy recent accomplishments include:

- Integration of electric vehicles into municipal fleet and installation of public electric vehicle chargers;
- Encouraging bicycling and walking through “complete streets” transportation planning and the *Vision Zero Action Plan*;
- Installation of the City's first-ever on-street protected bike lanes;
- Launch of a bike share program in partnership with Citi Bike;
- Installation of photovoltaic array on the roof of the municipal JC DPW building;
- Creation of a Green Business Certification Program;
- Creation of a residential backyard and community drop-off composting program;
- Energy efficiency and general sustainability education for residents and businesses;
- Adoption of Forestry Standards and more stringent tree planting requirements for new development; and
- Implementation of green infrastructure within City parks and streetscapes.

Together, these actions, along with the Action Items presented in the following pages, form a drumbeat on the path to a low-carbon, resilient, and equitable future.



EV charging photo credit to **photo contest winner: Robert Schmitz**

A HISTORY OF RAISING CLIMATE AMBITION



2015

Resolution in Support of Taking Action to Fight Global Climate Change

Jersey City Council passes Resolution 15-485, committing the City to achieving an 80 percent emissions reduction by 2050, a goal in line with the foundational requirement in the Paris Agreement, adopted at the UN climate conference in 2015.

2015

Tree Canopy Assessment

Jersey City's tree canopy was mapped and analyzed as part of the Jersey City Environmental Commission's role of inventorying environmental resources and promoting long-range planning. The City's current tree canopy coverage is 17 percent, far less than comparable urban areas, with disparities between wards. The assessment findings are integral to nature-based approaches to lowering the City's emissions while reducing heat and inequities by ward. The goals include expanding Jersey City's tree canopy, promoting long-term viability for city trees, and creating a long-term funding mechanism for city tree planting and care.

2017

Jersey City Joins Climate Mayors

The day after the U.S. Federal Government announced its withdrawal from the Paris Agreement, Mayor Steven Furlop signed the Mayors Climate Commitment to uphold the agreement's goals. Mayor Furlop became part of a bipartisan coalition of mayors working to demonstrate leadership on climate change.

2017

Resolution Affirming Commitment to the Paris Agreement

With the passage of Resolution 17-517, City Council reaffirms its commitment to environmental sustainability and combating the climate crisis.

Jersey City Resiliency Master Plan and Adaptation Master Plan

Forty percent of Jersey City's land area lies within the FEMA Special Flood Hazard Area, putting our residents, businesses, community facilities, infrastructure, and historic landmarks at risk. In 2012 Superstorm Sandy caused major damage and disruption in low-lying areas throughout the City. In response the City created the *Resiliency and Adaptation Master Plans*, which identified the City's vulnerabilities and established a plan for adaptation that would protect its valuable social, historic, and economic assets against the changing environment and increased risk of storm events.

2017



SURVEY SAYS!

"Jersey City can have a huge impact on the environment and its residents by supporting an effective tree-planting and maintenance program."



A HISTORY OF RAISING CLIMATE AMBITION

2017

Urban Environmental Green Infrastructure Plan

Green infrastructure refers to natural and constructed stormwater controls that mimic the natural hydrologic cycle by capturing, treating, and/or using stormwater runoff from public and private properties. The *Urban Environmental Green Infrastructure Plan* recommends locations throughout Jersey City where green infrastructure such as bioswales and green streets should be installed to manage urban stormwater and mitigate localized flooding.

2018

Jersey City Joins ICLEI-Local Governments for Sustainability

The global network of local governments supports the City in developing a greenhouse gas inventory in 2019 based on 2016 data in order to establish a baseline for emissions. Jersey City joins 18 other cities around the country in a climate planning training program.

2018

New Jersey Passes Renewable Energy Bill

In NJ A3723, the State requires 21 percent of the energy sold within New Jersey to come from Class I renewable energy sources by 2020, 35 percent by 2025 and 50 percent by 2030. Jersey City begins the process to strengthen support and city readiness for increased renewables in its energy mix.

2018

Jersey City Joins the Global Covenant of Mayor for Climate & Energy

This global leadership campaign requires a number of commitments, including conducting a citywide greenhouse gas inventory, developing an emissions-reduction target, assessing climate vulnerability, and developing a climate action plan.

2018

Composting Program Launches

Since the program was launched, more than 85,000 pounds of food and yard waste have been diverted from the landfill as part of the City's composting program, which includes backyard composting and residential drop off at 14 locations. The diverted emissions are the equivalent to taking 10,000 cars off Jersey City roads.⁸

2018

New Jersey Re-enters RGGI

With NJ Executive Order 7, the State reenters the Regional Greenhouse Gas Initiative, a cooperative effort among Mid-Atlantic states to reduce emissions through a carbon-budget trading program.

⁸Stopwaste Greenhouse Gas Reduction Calculator. Estimates mixed organics at and average 4,250 pound of compost monthly since May 2019. <http://www.stopwaste.co/calculator/>.

A HISTORY OF RAISING CLIMATE AMBITION



2019

Jersey City Flood Overlay Zone enacted

As part of the larger resiliency measures being undertaken by Jersey City, the City adopted the Flood Overlay Zone with green infrastructure requirements for new development. In order to better prepare for future storms and reduce flood risks, zoning changes were made to the Jersey City Land Development Ordinance. The 2017 Resiliency Master Plan and Adaptation Master Plan recommended these changes to protect flood-prone FEMA-designated zones through resilient design and green infrastructure solutions

2019

Let's Ride JC Bicycle Master Plan Adopted

For over a year, the City of Jersey City, its residents, and its consultant team evaluated how the City can better support biking for people of all ages and abilities, oriented around a Learn-Experiment-Let's Ride structure. This process produced a comprehensive, actionable bike master plan and bikeway design guide for new and improved bicycle infrastructure citywide.

2019

Vision Zero and Pedestrian Enhancement Plan Adopted

An average 300 crashes and 9 traffic fatalities occur each year in Jersey City. In response, Mayor Steven M. Fulop signed an executive order adopting Vision Zero, creating a task force of transportation officials, public safety officers, and members of the public, who developed a *Vision Zero Action Plan* over two years. The vision aligns with the Pedestrian Enhancement Plan and aims to eliminate traffic-related injuries on Jersey City streets by 2026 while building a walkable, bikeable community.

2019

Community-wide Greenhouse Gas Inventory Created

Stationary energy (commercial, residential, and industrial energy) accounted for 67 percent (1,948,123 MtCO₂e) of total emissions, transportation accounted for 30 percent (880,044 MtCO₂e), and waste 3 percent (69,109 MtCO₂e).

2020

Executive Order on Vehicle Electrification

Mayor Fulop's order calls for expansive implementation of electric vehicles throughout Jersey City's municipal fleet, making the City the first on the East Coast with fully electric garbage trucks and some of the first EV Police response vehicles. The infrastructure advancements to New Jersey's largest municipal fleet fall under the Mayor's Executive Order to require 10% of all new municipal fleet vehicles to be fully electric this year where available, with a goal of 100% of new municipal fleet vehicles to be fully electric by 2030.



ALIGNMENT WITH THE STATE OF NEW JERSEY'S CLIMATE GOALS



The State of New Jersey released its *Energy Master Plan: Pathway to 2050* in 2019, followed by the *State's Global Warming Response Act 80x50 Report* in 2020, calling on New Jersey to reduce statewide greenhouse gas emissions 80% below 2006 levels by 2050.⁹

Jersey City's emissions profile largely mirrors that of the State's, for which the transportation sector represents the largest source of GHG emissions in New Jersey (42%), followed by the combined residential and commercial sectors (26%), and electric generation (19%). Jersey City's Climate and Energy Plan outlines the strategy to contribute to this goal at the city level.

The Energy Master Plan is guided by seven overarching strategies, with an emphasis on transitioning to 100% clean electricity by 2050. Other strategies include reducing emissions in

transportation, maximizing energy efficiency to reduce peak demand, supporting community initiatives and growing the economy through innovation. The plan aligns with the 80x50 Report, which centers its recommendations on three key strategies: (1) replacing internal combustion vehicles with electric vehicles, (2) converting space and water heating in the residential and commercial buildings to electric heat, and (3) replacing fossil fuels in the electric generation sector with renewable energy sources. The *Jersey City Climate and Energy Action Plan* stands up the State's goals at the local level with actions to address energy, transportation and waste. The alignment is articulated in the table below for these three sectors. Whereas the State's plan covers additional sectors, including for agriculture and industry, the alignment detail here was selected based on the three Action Item focus areas prioritized by the Jersey City climate and energy planning process.

WHAT IS CLEAN ENERGY?

The State's Energy Master Plan defines "100% clean energy by 2050" to mean 100% carbon-neutral electricity generation and maximum electrification of the transportation and building sectors—the two sectors that produce the greatest carbon emissions in the state—to meet or exceed the Global Warming Response Act emissions reductions by 2050. (EMP, Executive Summary, Pg 11).

| State of New Jersey 80x50 Plan | State of New Jersey Energy Master Plan: Pathway to 2050 | Jersey City Climate and Energy Action Plan |
|--|---|--|
| Transportation | | |
| A rapid and complete transition away from fossil-powered vehicles, ensuring average adoption rates of at least 111,000 new electric vehicles annually through 2025 | Goal 1.1.6: NJ TRANSIT will accelerate deployment of electric buses in urban areas and is establishing a schedule for bus fleet conversion. | T&LU-9: Partner with NJ TRANSIT to establish a transition plan to convert the bus fleet to 100 percent electric by 2035. |

ALIGNMENT WITH THE STATE OF **NEW JERSEY'S CLIMATE GOALS**

| State of New Jersey 80x50 Plan | State of New Jersey Energy Master Plan: Pathway to 2050 | Jersey City Climate and Energy Action Plan |
|--|--|---|
| Transportation | | |
| <p>Implement a long-term infrastructure development program dedicated to constructing a statewide electric vehicle charging network</p> | <p>Goal 4.1.5: Develop electric vehicle-ready and demand response-ready building codes for new multi-unit dwelling and commercial construction.; Goal 1.1.2 Deploy electric vehicle charging infrastructure throughout the state; Goal 1.1.7 Increase clean transportation options in low- and moderate-income and environmental</p> | <p>E7: By 2022 require all new buildings over 25 square feet to be demand response, solar and EV ready.; T&LU-11: Increase the availability of Electric Vehicle (EV) charging infrastructure throughout the City including lower income communities.</p> |
| <p>Identify regulatory, funding and financing mechanisms to convert medium- and heavy-duty vehicles to electric, renewable biodiesel and hydrogen fuel sources</p> | <p>Goal 1.1.3 Encourage electric vehicle adoption through the purchase of electric vehicles and incentives for charging station installation in certain locations; Goal 1.1.4 Increase consumer and fleet owner awareness and acceptance of electric vehicles</p> | <p>T&LU-12: By 2030, require 100 percent of all new eligible municipal fleet vehicles to be electric vehicles.</p> |
| <p>Increase ridership on mass transit</p> | <p>Goal 1.2.1 Identify opportunities to strengthen connections between people, jobs, and services</p> | <p>T&LU-7: Work with NJ Transit and PATH to increase frequency, reliability, and coverage of existing services.; T&LU-8: Explore additional innovative transit options for areas of the City that currently have limited transit options.; T&LU-10: Implement a type of 'rapid bus transit' along key corridors that increases speed for buses through dedicated lanes and signal prioritization.</p> |

ALIGNMENT WITH THE STATE OF **NEW JERSEY'S CLIMATE GOALS**

| State of New Jersey 80x50 Plan | State of New Jersey Energy Master Plan: Pathway to 2050 | Jersey City Climate and Energy Action Plan |
|--|--|--|
| Transportation | | |
| Expand transit-oriented development. | Goal 6.1.2: Encourage communities to incorporate land use, zoning, and multimodal transportation plans into their Community Energy Plans.; Goal 1.2.2: Energize the implementation of the Transit Village Initiative and transit-oriented development. | T&LU-4: Rezone for a mix of uses so as to encourage walkable neighborhoods throughout the City.; T&LU-5: Encourage development of mixed-use transit nodes in under-served, lower-density areas of the City. |
| Transportation Reduction Pathway 4: Incentivize work-from-home policies, ridesharing, home delivery, and other strategies. | Goal 1.2.1: Identify opportunities to strengthen connections between people, jobs, and services. | T&LU-14: Continue to expand commute trip reduction programs for city employees including free or subsidized transit passes for employees, and encourage private employers to do the same.; T&LU-15: Explore methods to incentivize businesses to increase telecommuting and transition to a 4-day work week. |
| Reduction Pathway 4: Incentivize work-from-home policies, ridesharing, home delivery, and other strategies. | Goal 6.3.1: Prioritize replacement of fossil-fueled public transportation fleets with electric fleets, with a focus on environmental justice communities.; Goal 6.3.4: Develop shared mobility programs, including bike sharing, electric taxis, electric ride-hailing and electric car sharing, neighborhood electric vehicles, and scooters and e-bikes. | T&LU-16: Work with the State to develop an e-mobility program, including neighborhood electric vehicle car sharing, and e-bikes. |

ALIGNMENT WITH THE STATE OF **NEW JERSEY'S CLIMATE GOALS**

| State of New Jersey 80x50 Plan | State of New Jersey Energy Master Plan: Pathway to 2050 | Jersey City Climate and Energy Action Plan |
|---|--|--|
| Energy | | |
| <p>Residential and Commercial Sector Pathway 2: Maximize energy efficiency; Implement CEA required energy benchmarking in Commercial Properties of 25,000+ sq.ft. or greater.</p> | <p>Goal 3.3.2 Establish transparent benchmarking and energy labeling.</p> | <p>E-2: Require energy benchmarking for all buildings over 25,000 ft2 in 2023, and voluntary benchmarking in 2022.</p> |
| <p>Pursue the rapid development of renewable electric generation; 2050 Recommendation: Early efforts should focus on creating a dramatically streamlined renewable energy and distributed energy resources (DER) project development process, from the availability of funding mechanisms to expedited permitting and siting of DERs and grid interconnections.</p> | <p>Goal 1.3.3 Support community solar developments on port property; Goal 2.1.8 Coordinate permitting and siting processes for renewable energy development; Goal 2.3.1 Continue to grow New Jersey's community solar program; Goal 2.3.3 Maximize solar rooftop and community solar development in urban and low- and moderate-income communities using the local workforce; Goal 6.2.1 Support community-led development of community solar projects</p> | <p>E-10: Streamline and clarify the permitting process for building-mounted solar panel systems.; E-11: Establish local Community Solar program.; E-12: Explore municipal energy aggregation with the goal of providing 100% clean energy to all Jersey City residents by 2035; E-18: By 2021, complete an assessment of solar generation potential on all municipal properties.</p> |
| <p>Implement regulatory limitations on CO2 emissions,</p> | <p>Goal Area 2.1 100% clean power by 2050</p> | <p>E-17: Require 100% clean energy for municipal facilities by 2030.</p> |

ALIGNMENT WITH THE STATE OF **NEW JERSEY'S CLIMATE GOALS**

| State of New Jersey 80x50 Plan | State of New Jersey Energy Master Plan: Pathway to 2050 | Jersey City Climate and Energy Action Plan |
|---|---|--|
| Energy | | |
| | <p>Goal 6.2.3 Develop clean energy workforce opportunities and training programs; Goal 6.2.2 Incentivize maximum installation of rooftop and community solar by the local workforce; Goal Area 7.2 Establish workforce training programs to ensure New Jersey has the local expertise necessary to support a growing clean energy economy and provide support to those in stagnating industries to refine their skills in line with new needs</p> | <p>E-13: Work with contractors, unions, and trade schools to develop clean energy workforce opportunities and training programs.</p> |
| <p>Adapt the electric grid to accommodate distributed energy resources such as solar PV and battery storage</p> | <p>1.3.3 Support community solar developments on port property; 2.3.1 Continue to grow New Jersey's community solar program; 2.3.3 Maximize solar rooftop and community solar development in urban and low- and moderate-income communities using the local workforce; Goal 5.1.1: Require utilities to establish Integrated Distribution Plans</p> | <p>E-11: Establish local Community Solar program ; E-12: Explore municipal energy aggregation with the goal of providing 100% clean energy to all Jersey City residents by 2035.; E-19: Work with NJ Board of Utilities and NJDEP to identify opportunities for micro grids and locating renewable energy with storage at critical facilities beginning in 2021.</p> |
| <p>Carefully manage loads and improve efficiency; Retain existing carbon-free resources, including the state's three nuclear power plants; state agencies promote energy efficiency by working with the Division of Property Management and Construction to develop energy savings plans and P.L 2007, c. 269 requires all new state construction over 15,000 square feet to meet LEED silver level or above.</p> | <p>Goal 3.3.3: Establish mechanisms to increase building efficiency in existing buildings; Goal 3.3.4: Build state-funded projects and buildings to a high performance standard; Goal 3.3.5 Improve energy efficiency in, and retrofit state buildings to, a high performance standard.</p> | <p>E-14: Utilize New Jersey Energy Savings Improvement Program (ESIP) and New Jersey Clean Energy Program incentive programs to retrofit municipal buildings for energy and water efficiency without upfront capital investment; E-16: Require all new construction for municipal buildings to meet consistent energy efficiency standards and require all buildings occupied by municipal operations in a long-term capacity to be Energy star certified.</p> |

ALIGNMENT WITH THE STATE OF **NEW JERSEY'S CLIMATE GOALS**

| State of New Jersey 80x50 Plan | State of New Jersey Energy Master Plan: Pathway to 2050 | Jersey City Climate and Energy Action Plan |
|---|---|---|
| Waste | | |
| <p>Waste & Agriculture Sector Pathway 1: Reduce and recover food waste; Adopt regulations to implement requirements of the Food Waste Recycling and Waste-to-Energy Production Act.</p> | | <p>W-1: Develop a Zero Waste Plan that establishes citywide aggressive waste reduction targets and strategies for achieving them; W-8: Expand the NJ Food Waste Mandate to encompass smaller institutions and businesses by 2025. Work with the State to ensure that food waste recycling facilities are located within 25 miles of Jersey City; W-10: Expand residential composting opportunities for food waste and yard waste, with a goal to compost 2,000 tons per year within the city by 2025.</p> |
| <p>Promote the development of food waste processing facilities and the development of markets and best practices for sectors of the economy generating food waste.</p> | <p>Goal: 2.3.7: Maximize the use of source separated organic waste for energy production and encourage anaerobic digestion for electricity production or natural gas pipeline injections.</p> | <p>W-5: Promote programs designed to advance sustainable business practices, such as the Jersey City Green Business Program and the New Jersey Sustainable Business Registry.; W-8: Expand the NJ Food Waste Mandate to encompass smaller institutions and businesses by 2025. Work with the State to ensure that food waste recycling facilities are located within 25 miles of Jersey City.</p> |
| <p>Waste and Agriculture Sector Pathway 2: Optimize energy recovery in wastewater treatment; Promote and support energy recovery efforts from wastewater treatment operations.</p> | <p>Biomass: Goal 2.1.8: Coordinate permitting and siting processes for renewable energy development; Goal: 2.3.7: Maximize the use of source separated organic waste for energy production and encourage anaerobic digestion for electricity production or natural gas pipeline injections.</p> | <p>W-13: Encourage the state and PVSC to explore biomass resources as a renewable regional energy source; W-14: Pursue opportunities with regional partners to increase energy efficiency in wastewater treatment.</p> |

ALIGNMENT WITH THE STATE OF NEW JERSEY'S CLIMATE GOALS

Regarding climate adaptation, this plan builds from another State report, *New Jersey Scientific Report on Climate Change*, which found that the risk to New Jersey's coastal communities from sea-level rise under even a moderate emissions scenario, is 5.1 feet of sea level rise by the year 2100 and 8.3 feet by the year 2150. This outcome would erode large land areas of the state — including in Jersey City — risk near total loss of New Jersey barrier islands, and devastate the State's tourism industry and larger economy. When we undertook the climate vulnerability assessment for this plan, we did so by sharing in the State's affirmation that, just as Jersey City is uniquely vulnerable to risks from climate change, so too is our city uniquely positioned to turn this challenge into tremendous opportunity for our people, businesses and institutions.

SURVEY SAYS!

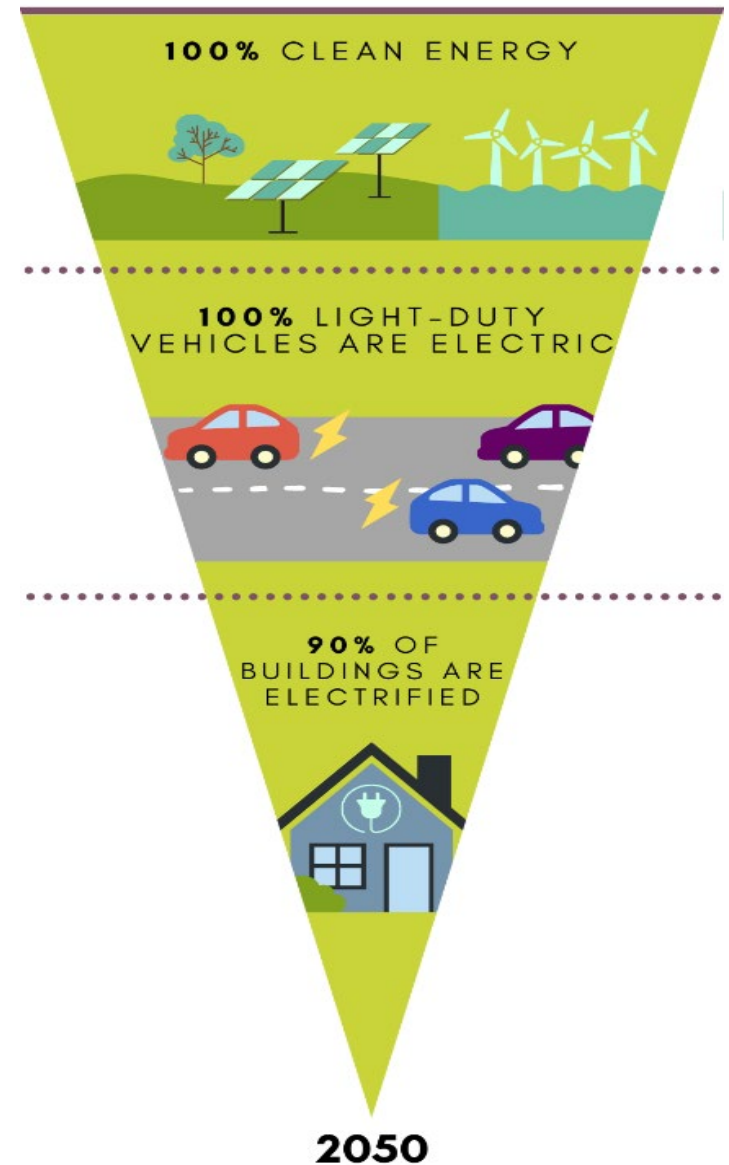
"There's so much that we can do for improving our bike lanes, as well as to create new and improved infrastructure for those who use non-car methods of commuting."

CLIMATE DATA OVERVIEW

Greenhouse Gas Emissions Overview

The first step in a climate and energy planning process is to Analyze. Recognizing that the City needed a baseline from which to measure its progress on emissions management, Jersey City created a greenhouse gas inventory of citywide emissions in 2019, using the most recent data set available that spanned a comprehensive set of sectors, which was from 2016. In order to meet a standard of excellence for this accounting work and satisfy commitments to the Global Covenant of Mayors for Climate & Energy, Jersey City's emissions inventory strived for protocol compliance under the Global Protocol for Community-scale Greenhouse Gas Emission Inventories. The City worked with Montclair State University and ICLEI, using ICLEI's ClearPath tool to develop the inventory.

Key Strategies to Achieve 80x50



New Jersey's Global Warming Response Act 80x50 Report. Department of Environmental Protection, State of New Jersey, 2020.

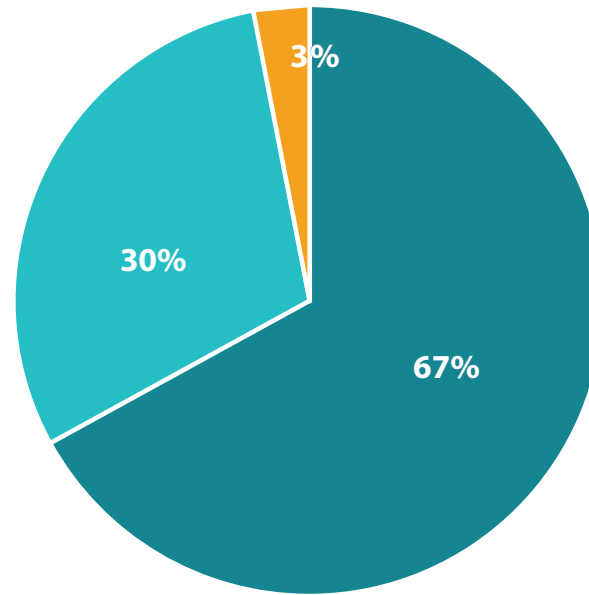
CLIMATE DATA OVERVIEW

What are the Sources of Jersey City's GHG Emissions?

Understanding Jersey City's highest emitting sectors and subsectors helps us identify where we should be focusing our emissions-reductions efforts to have the most impact. Of the 2,897,275 metric tons of CO₂e emitted communitywide by Jersey City in 2016, 67 percent (1,948,123 MtCO₂e) came from stationary energy. Of this sector, commercial buildings' energy use accounted for 62 percent of emissions, residential 24 percent, and industrial 14 percent.

The second highest emitting sector was transportation with 30 percent of total GHG emissions (880,044 MtCO₂e). Of this sector, on-road transportation accounted for 97.6 percent of total emissions and rail transportation accounted for 2.4 percent.

Total GHG Emissions by Sector

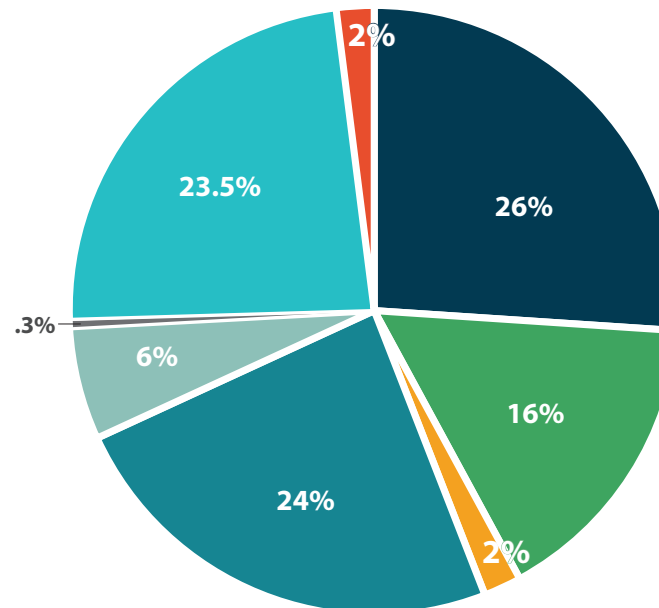


- Buildings
- Transportation
- Waste

2016 Jersey City Total GHG Emissions by Sector

Source: City of Jersey City 2016 Inventory of Communitywide Greenhouse Gas Emissions (Jersey City Office of Sustainability, 2019)

GHG Emissions By Energy Source



- Electricity
- #2 Fuel Oil
- #5 & 6 Fuel Oil
- Natural Gas
- Diesel
- LPG
- Gasoline
- Landfills

CLIMATE DATA OVERVIEW

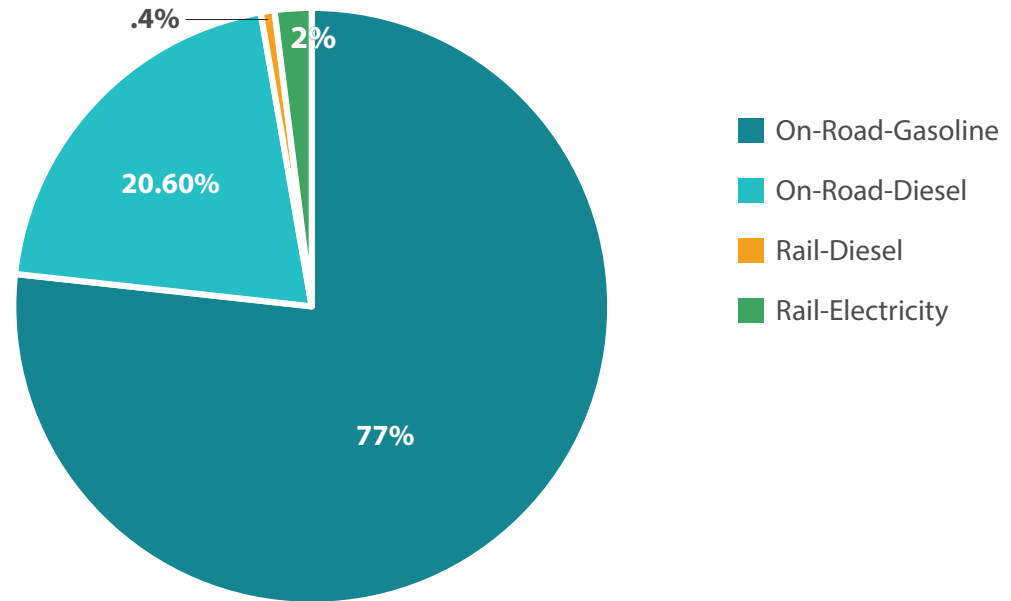
The least emitting sector was waste, which accounted for 3 percent (69,109 MtCO₂e) of total GHG emissions, 98 percent of which was emitted from solid waste generated in Jersey City and transported to landfills outside of city limits. Two percent of total waste GHG emissions were generated from the treatment of wastewater. Based on the results of the inventory it is clear we need to focus our efforts on reducing the energy use of buildings, in particular commercial and residential buildings, and reducing on-road emissions caused by personal vehicles, trucks, and buses.

How are GHG Emissions Projected to Change?

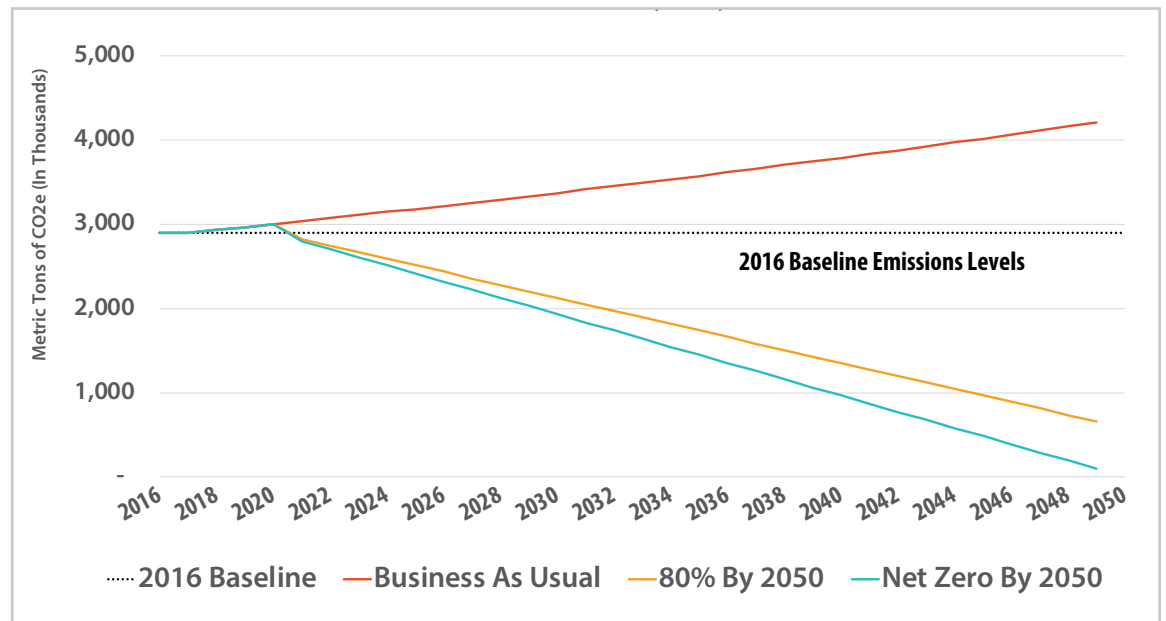
Based on current energy use and expected population increases, Jersey City’s community-wide greenhouse gas emissions could increase by 15 percent by 2030 (to 3,332,472 metric tons of CO₂e), and 30 percent by 2050 (to 4,207,861 metric tons of CO₂e) if no actions towards reducing emissions are taken.

The graph below shows the “business as usual” scenario alongside possible pathways for Jersey City to tackle its greenhouse gas emissions. The red line indicates “business as usual.” The other two lines show potential decarbonization pathways for meeting different reduction targets. The 80 percent reduction by 2050 target, which the City has already committed to, is in line with the Paris Climate Agreement’s 2°C (3.6°F) global warming scenario. The blue line illustrates a more aggressive reduction target or net zero by 2050, which is in line with the most recent climate science for a 1.5°C (2.7°F) global warming scenario.

Transportation GHG Emissions Breakdown



Carbon Scenarios for Jersey City



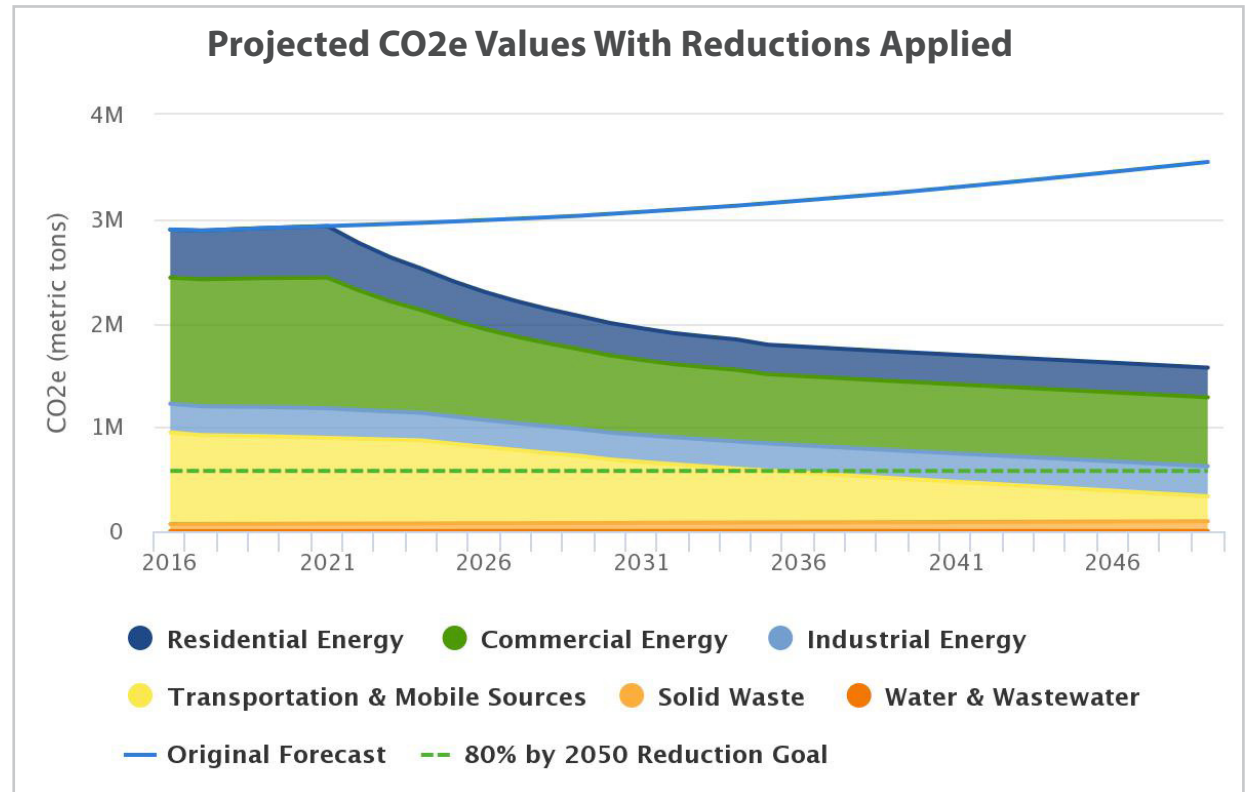
CLIMATE DATA OVERVIEW



How Will Jersey City Meet Our Climate Goals?

Jersey City’s target of an 80 percent emissions reduction by 2050 is ambitious and will require an approach that brings all sectors to the table. This is why the Climate Action Working Groups represent energy, equity, transportation and land use, and waste, in recognition that all industries and myriad stakeholders will need to be on board. The Working Group priorities presented as Action Items in the following section get us part-way to our goal—but more work needs to be done. Data analysis for this plan reveals that Jersey City will need to find opportunities to cut emissions by an additional 1.5 million metric tons of carbon dioxide-equivalent in order to meet our mid-century target. Commercial energy, industrial and residential energy will be of particular focus.

The pages that follow focus on actions that can be implemented over the next 10 years to build a foundation and move the city well on the path towards decarbonization. These actions make significant strides toward our goal. The Office of Sustainability recognizes that additional or expanded actions will be needed after 2030 to reach the 2050 goal and will conduct an assessment of the Climate and Energy Action Plan every 5 years, while releasing a progress update every two years. Together with the Steering Committee, Working Groups, City leadership and our partners, we are turning cause for concern into a call to action.



Actions included in this modeling are: A transition to 100 percent clean electricity by 2035; a 20 percent reduction to natural gas and fuel oil in existing residential and commercial buildings by 2032; a reduction to 36% of usage in residential buildings, based on the percent in buildings with more than 20 units from census data; 95 percent of new residential and commercial building area transferred to net-zero energy after 2025; bicycle mode share increasing to 3 percent, with a 10 percent increase in transit coverage and 100 percent of passenger vehicles are electrified by 2050 (analysis did not model a change to freight vehicles).



SURVEY SAYS!

“Create a community garden program that connects members with spaces to grow edible plants and have the parks department help maintain and distribute community grown food”

CLIMATE DATA OVERVIEW



What are Jersey City's Climate Vulnerabilities?

Jersey City's three-part climate adaptation and resilience effort undertaken in 2017—summarized in the report *Resilient Jersey City* and recorded in the *Adaptation Master Plan*, *Resilient Master Plan*, and *Urban Environmental Green Infrastructure Design Plan*—focus on impacts from flooding and aging, overstressed stormwater systems. As a large, densely populated city, coupled with proximity to tidal waterways and areas of low-lying elevation, Jersey City experiences particular flood risks. Moreover, the City has a combined sewer system, meaning there is a system of pipes that collect sewage in addition to surface water. When the system is overwhelmed in the event of a rain event, these two sources are combined and discharged into waterways. This has a negative impact on the health of the City's waterways and poses risks to public health. Indeed, over the years, Jersey City has found itself coping with flooding issues and recovering from storms. Between 1954 and 2014, FEMA issued a disaster or emergency declaration for Hudson County for four coastal storm-related events. We know the need to be prepared for flooding events is the purpose of identifying existing conditions, which include social, environmental, and economic vulnerabilities.

The City's resiliency planning documents provided specific recommendations for addressing flooding, including building floodwalls along the Hackensack River in low-lying areas, elevating existing waterfront boardwalks and walkways, and raising land in low-lying parts of the City such as Mill Creek, Bergen-Lafayette, and parts of Downtown. The plans also recommend utilizing nature-based solutions such as native basin plantings that direct stormwater runoff to feed a root system below ground, rain gardens that divert water from paved areas, and bioswales that direct water through graded and planted swales. In each case, natural beauty is brought into neighborhoods which bring value outside of flood events.

FEMA Special Flood Hazard Area Map



Map by BfJ Planning

CLIMATE DATA OVERVIEW



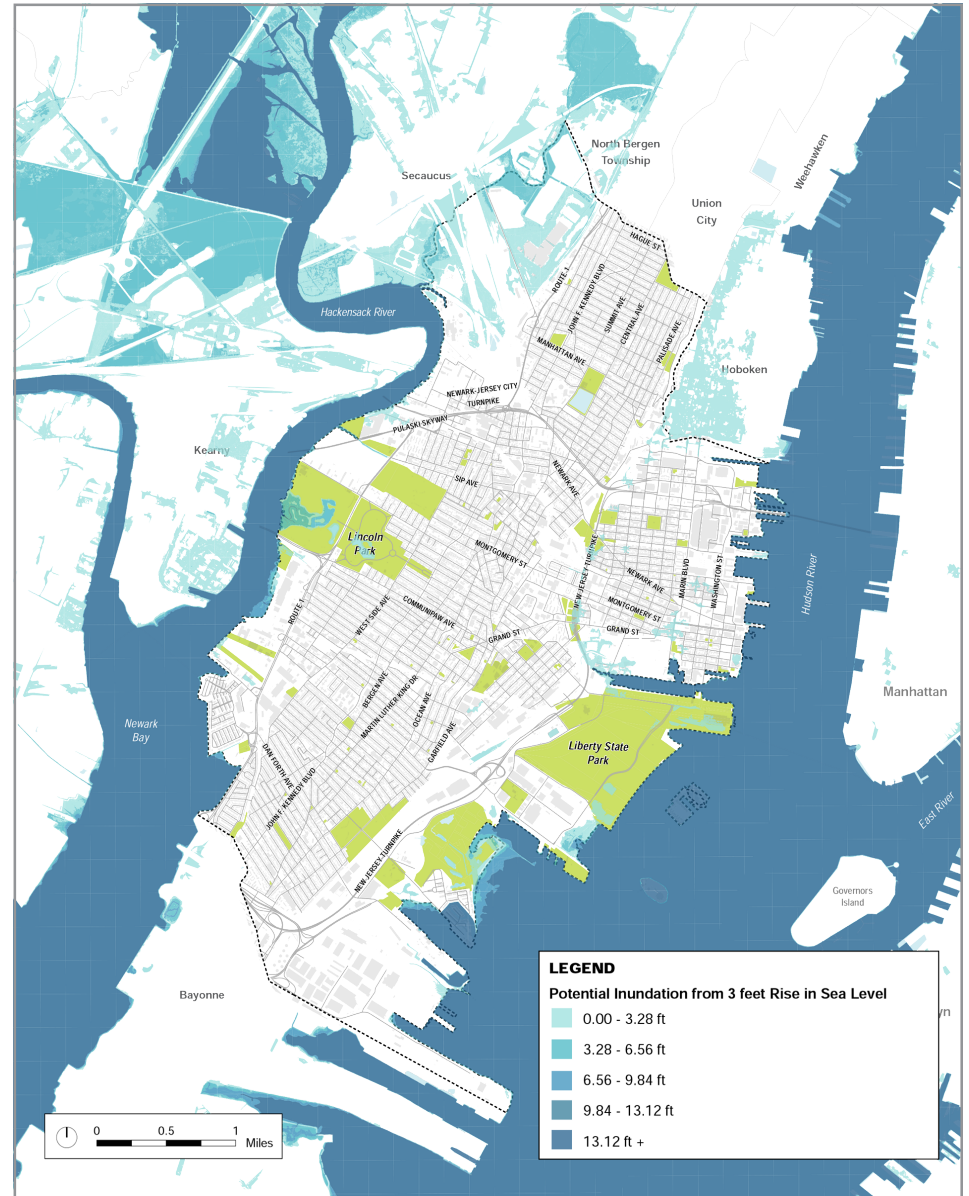
But climate impacts to Jersey City, including those already being felt today, go beyond those associated with flooding. As part of this plan, we took a more comprehensive look at climate change projections for our city, including those that are heat- as well as precipitation-related, using ICLEI's Temperate tool. The tool features 22 temperature and precipitation indicators derived from either the NASA Earth Exchange Global Daily Downscaled Projections (NASA NEX-GDDP) or the University of California San Diego Localized Constructed Analogs (UCSD LOCA) datasets. We identified potential climate hazards specifically for Jersey City based on the city's geographic location and findings from the 2014 National Climate Assessment. The nexus between climate hazards and community systems is based on the Climate Risk and Adaptation Framework and Taxonomy (CRAFT) developed by the Global Covenant of Mayors for Climate & Energy (GCoM), C40 Cities, and ARUP. The key vulnerabilities facing our community include:

Heat

In New Jersey, the average temperature has already increased by 3.5 degrees Fahrenheit since 1895, which is faster than the worldwide average. Urban areas like Jersey City are also subject to the urban heat island effect since man-made materials like concrete and asphalt tend to absorb heat and make temperatures hotter than adjacent areas that are less urbanized. Climate models predict that climate change could cause up to a 55-percent increase in summer heat-related mortality compared to the 1990s. By 2050, around 70 percent of summers are anticipated to be hotter than the warmest summer to date.

Sea-level rise

The combination of rapid sea-level rise and increased precipitation will contribute to the increase in coastal flooding events. Our historic downtown and waterfront neighborhoods are located in a floodplain and are home to 24.3 percent of the Jersey City population. However, households that would have the most trouble recovering from flood-related impacts due to being economically disadvantaged or having members over 65 are located outside of the floodplain.



Map by BfJ Planning

CLIMATE DATA OVERVIEW

Drought

Historically, Jersey City doesn't experience severe drought since the city is so close to the Atlantic Ocean. Between 2015 and 2019, there were 5 mild to moderate drought events that each lasted for less than 4 months. In the future, droughts will become more frequent but not necessarily more severe. The shorter amount of time between droughts means that the water supply systems have less time to recover. This, combined with an expected population increase of 29 percent by 2040 means that the demand for water may strain existing systems. Jersey City gets its water supply from surface water, which is affected more quickly during a drought than groundwater supply. The entire city will be affected by the drought, but children, the elderly, and those with chronic conditions are especially vulnerable to the health effects caused by drought, like the increased risk of water-borne illnesses or drinking water shortages. Emergency services and commercial businesses that rely on water, such as firefighting or landscaping businesses, may struggle with the lack of water. The surrounding environment, including parks or wetlands, may also be affected.

Extreme cold

Historically, Jersey City has experienced extreme winter conditions an average 59 times between 1950 and 2018. Average annual temperatures

have increased by 3 degrees Fahrenheit in the past century. Because of this, it's likely that the winter season will get shorter over time and overall snow cover and sea ice extent will decrease. However, it is also possible that the intensity of individual winter storms may increase, and the warming of the lower atmosphere may cause ice storms to increase in frequency over time. Not much quantitative data currently exists that can help us predict how climate change will affect this hazard. What we do know is that the entire population is exposed in some way to extreme winter conditions. The elderly are more vulnerable due to their increased risk of injuries and death from slips and falls on patches of ice. The homeless often have no shelter from ice and snow. The low-income population may be living in housing with poor insulation, or struggle to pay for proper heating supply. Icy roads and heavy snow have the capacity to shut down the city's rail network and make the roads dangerous to drive on. If emergency services can't clear roads quickly, residents could be stranded. Stormy conditions could create difficulties for the ferries that travel to New York City. Even after the winter weather event is over, road salt and the freeze-thaw cycle of frequent winter events can cause prolonged damage to vehicles, roads, and rail lines. Snowmelt that contains road salt or other ice-removal chemicals could contaminate local waterways and hinder plant growth. Finally, accumulations of snow and ice can knock down trees and take



CLIMATE DATA OVERVIEW



out power lines, which could leave parts of the city without electricity. Without access to backup power, residents could have limited access to important alerts and emergency services.

Storms

Historically, the coastal location of Jersey City puts our community at risk for tropical storms. One of the most notable incidents was Superstorm Sandy in 2012. Half the city lost power, patients had to be evacuated from the local medical center, many city buildings were also flooded. Currently, about 35 percent of the population, 34.4 percent of residential properties, and 38 percent of non-residential properties are at risk of being inundated by storm inundation. Most of the at-risk properties are located near the coastal boundaries of the city. New Jersey's average temperature has risen more quickly than the global average, and will probably experience more annual precipitation and rising sea levels. This could result in more frequent and severe hurricanes and increased depths of inundation during hurricane events. While the entire population is at risk of being affected by a hurricane, those who may have trouble evacuating are especially vulnerable. This includes seniors over 65 or people who experience mobility-related disabilities because they may need extra time or assistance during an evacuation. Low-income households who may not have the money for a hotel or flood damage repairs may experience extra difficulties in post-

hurricane recovery. The transportation system is at risk of being paralyzed by downed trees and debris that blocks roads or rail lines. Storm inundation could make the transportation system unusable, delaying emergency services and leaving residents stranded. High winds can knock over trees and cut power lines, which would leave many households and businesses without electricity. Hurricanes also cause millions of dollars worth of property damage, especially to residential buildings or high-rise buildings, which typically aren't constructed to be as resilient to high-speed winds.

Biological hazards

The most notable historical example is the 1918 Spanish Influenza pandemic. In addition, the current COVID-19 has devastated the entire world. The impact of climate change on biological hazards is not very well understood right now. On one hand, warmer habitats can increase the number of mosquitos or other disease-transmitting animals. Diseases that travel by air spread faster and with little warning, leaving hospitals and public health officials very little time to respond. Many people who contract the disease early may die due to a lack of treatments or vaccines available. Hospitals may be so preoccupied with treating patients for that specific disease that routine preventive care and elective surgeries may be skipped or postponed. To prevent the spread of disease, travel may be restricted or banned outright. Cultural and religious events,

such as funeral services, may have to be changed or postponed in order to prevent the possible spread of the disease. Higher-income households who can afford to do so are moving to more suburban areas to avoid contact with people who may be infected. Jersey City residents from low-income or unemployed households may suffer disproportionately because they may lack health insurance or means to pay insurance copays or out-of-pocket expenses. Residents with certain chronic conditions may suffer from more severe symptoms than those that don't. The systemic racism that leads to inequitable outcomes for marginalized groups may be especially deadly in the case of a pandemic.



CLIMATE DATA OVERVIEW



| Climate Hazard | Probability | Magnitude | Social Impacts | Most relevant assets | Vulnerable populations |
|----------------|-------------|-------------|--|--|--|
| Sea Level Rise | Medium High | Medium | Fluctuating socio-economic conditions; Increased demand for healthcare services; Increased risk to already vulnerable populations; Increased conflict and/or crime; Population displacement; Loss of tax base to support public services | Transport; Commercial buildings; Social community & culture | Elderly; Marginalized groups; Persons with disabilities; Persons with chronic diseases; Low-income households; Unemployed persons; Persons living in sub-standard housing |
| Heat | Medium High | Medium High | Increased risk to already vulnerable populations | More research is needed | Women & girls; Children & youth; Elderly; Marginalized groups; Persons with disabilities; Persons with chronic diseases; Low-income households; Unemployed persons; Persons living in sub-standard housing |
| Drought | Medium High | Medium Low | Increased incidence and prevalence of disease and illness; Increased demand for public services; Increased risk to already vulnerable populations; Increased resource demand | Water supply & sanitation; Public health; Emergency services | Women & girls; Children & youth; Elderly; Marginalized groups; Persons with disabilities; Persons with chronic diseases; Low-income households; Unemployed persons; Persons living in sub-standard housing |



CLIMATE DATA OVERVIEW

Where do we go from here?

The collection and assessment of climate projects for Jersey City is only an initial step. From here, the Office of Sustainability will plan a series of public engagement opportunities to bring these insights to residents and begin the process of prioritizing adaptation action items, the same way that this plan prioritizes mitigation action items. An updated Adaptation Plan that includes heat, drought, changes in snow patterns, and shifts in seasonal patterns should be completed and is planned as part of future updates to the *Climate and Energy Action Plan*.



SURVEY SAYS!

“We need more intervention regarding home insulation in winter and green roofs or more reflective roofing paints and coverings in summer. Employ incentives for more efficient HVAC systems”

| Climate Hazard | Probability | Magnitude | Social Impacts | Most relevant assets | Vulnerable populations |
|--------------------|-------------------------|-------------|--|--|--|
| Extreme Cold | Medium High | Medium | Increased risk to already vulnerable populations | Energy; Transport; Environment, biodiversity, forestry | Elderly; Low-income households; Persons living in sub-standard housing; People experiencing homelessness |
| Storms | Medium High | Medium High | Fluctuating socio-economic conditions; Increased demand for healthcare services; Increased risk to already vulnerable populations; Loss of traditional jobs; Population displacement | Energy; Transport; Residential | Elderly; Persons with disabilities; Low-income households; Persons living in sub-standard housing |
| Biological Hazards | More research is needed | High | Increased incidence and prevalence of disease and illness; Increased demand for healthcare services; Increased risk to already vulnerable populations; Loss of tax base to support public services | Tourism; Public health; Social community & culture | Marginalized groups; Persons with chronic diseases; Low-income households; Unemployed persons |



THE ACTION ITEMS

THE ACTION ITEMS



How to Read This Plan

Timeframe: The timeframe for action implementation is categorized as 1-3 years (short-term), 3-5 years (medium-term), or 5-10 years (long-term).

Emissions Reduction: Actions are classified as high, medium or low emissions reduction potential. Some actions do not produce a direct emissions reduction but are needed to support other actions that do reduce emissions; these actions are classified as 'Facilitative' for emissions reduction potential. See Appendix C for more detail.

| Number | Description | Timeframe | Priority | Emissions Reduction | Co-Benefits |
|--------|---|-----------|----------|---------------------|-------------|
| E-1 | Create a one-year task force that will make recommendations on specific energy goals and requirements for commercial, industrial and multifamily buildings. | 1-3 years | High | Facilitative | |

Priority: Actions are classified as high, medium or low priority based on GHG reduction potential, feasibility and co-benefits. See Appendix B for more detail.

Co-Benefits: While action items are primarily intended to decrease greenhouse gas emissions, many of them provide other distinct community benefits as well. We categorized these community co-benefits into four primary types: economic sustainability, environmental quality and public health, equity, and resilience. See Appendix D for more detail.

The Action Items

ENERGY



DETAILS OF HIGH PRIORITY ENERGY ACTIONS



E-1: Energy task force

Additional planning and community input is needed to finalize many of the energy policies in this section. The task force will operate for one year and make recommendations on equitable implementation of energy actions and help establish goals and benchmarks. Taking an equitable approach means that energy solutions are focused on helping low income, communities of color become less burdened by the cost and the environmental impacts of the energy system. The task force will include representatives from City departments such as the Engineering, Traffic and Transportation, Zoning, Planning and Construction, and the Office of Sustainability, as well as community representation from SIDs, unions, developers, and community organizations. Members of historically underrepresented communities will also be part of the task force.

E-2: Building benchmarking

Benchmarking means tracking and reporting building energy performance in a standardized way. Benchmarking provides potential building tenants with information to anticipate energy costs of a particular building and to choose more efficient options, creating a market incentive for building owners to improve efficiency. Benchmarking also allows tracking the overall efficiency of buildings in the City and identifying buildings with the most potential for improvement.

The New Jersey Clean Energy Act of 2018 requires the Board of Public Utilities to establish a requirement for mandatory building benchmarking for all buildings over 25,000 square feet by 2023. Through this action, Jersey City will implement a voluntary benchmarking program by 2022. The voluntary program will help property owners prepare for mandatory reporting and will begin providing useful information on efficiency of buildings in the city.

DETAILS OF HIGH PRIORITY ENERGY ACTIONS



E-7: Solar, EV and demand response readiness for new buildings

Solar, EV and demand response readiness ensure that new buildings constructed in Jersey City will be prepared for future energy grid and vehicle charging needs. EV readiness means pre-wiring and electrical capacity are in place to allow EV charging to be easily added to parking spaces in the future. Solar readiness means pre-wiring is in place to allow easily adding solar to the building roof in the future. Demand response readiness means building controls are in place to allow utility adjustment of energy use at times of peak demand.

This action will amend Jersey City zoning laws by no later than 2022 to require all new buildings over 25,000 square feet to become Demand Response Ready and Solar Ready. In addition, all new buildings over 25,000 square feet with at least 4 parking spaces will be required to be Electric Vehicle (EV) Ready.

E-9: Cool roofing requirement

Sustainable roofing choices offer multiple benefits. Cool roofing is light colored or reflective, absorbing less heat from sunlight and significantly lowering the roof temperature. A cooler roof lowers the cooling energy load for the building underneath. Cool roofing products for commercial buildings are widely available, and many locations, including the State of California require cool roofing for new commercial buildings. Green roofs go a step further, adding a layer of soil and vegetation to the roof. Evaporation through the vegetation cools the roof, and many green roofs are also used as green space accessible to building occupants, providing recreation and mental health benefits. The cooling benefits of cool and green roofs extend beyond the buildings themselves, helping to alleviate the urban heat island effect. Solar panels added to a roof provide some shading to the roof, but the primary benefit is in the clean energy generated. This action will require by 2022 all new buildings over 25,000 square feet to utilize their roof for solar panels, a green roof, or a cool roof.



**SURVEY
SAYS!**

“I’d like to see better real-time metering technology and hourly pricing, as well as information on when the grid is using the most clean power.”

DETAILS OF HIGH PRIORITY ENERGY ACTIONS



E-11: Community solar

Community Solar provides solar power opportunities to renters, low-income homeowners, and others who are not able to install solar panels on their own home. The solar can be located either within the city, or outside the city anywhere in the utility service region, and residents subscribe to receive a bill credit for the electricity generated. There are currently two community solar projects servicing Jersey City, with a few hundred households using the energy. This number could be significantly expanded. Community solar projects could be developed directly by the City, or more likely in partnership with private developers.

E-17 & E-18: Municipal leadership in use of renewable energy

The City can set an example for private property owners and developers through its own operations. By 2030, municipal operations will be fueled by 100% clean energy and at least 80% should be from renewable sources. One way to increase the amount of renewable energy that the City uses is by installing solar panels on municipal buildings and municipal property (such as parking lots). By the end of 2021, the City will complete an assessment of solar generation potential on all municipal properties. Free tools such as [Project Sunroof](#) will aid in conducting the assessment.



**SURVEY
SAYS!**

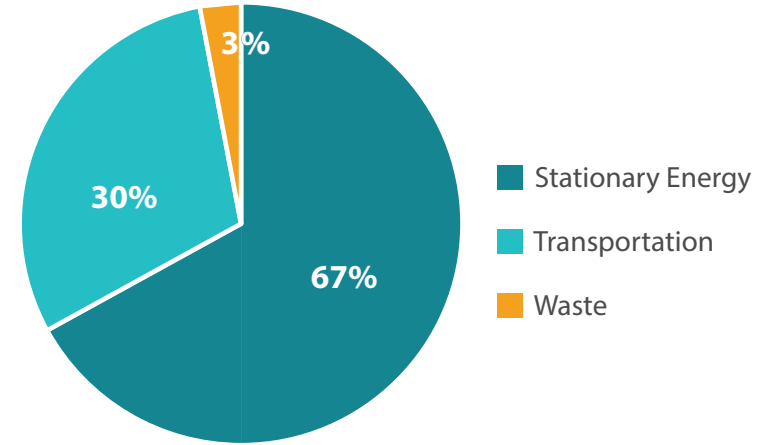
“Promote and facilitate the deployment of community solar.”

ENERGY ACTIONS



Energy use in buildings is responsible for 67% of Jersey City community GHG emissions. Jersey City's approach to addressing energy related emissions starts with making new and existing buildings more energy efficient. Building efficiency improves the health of building residents, reduces energy cost burden for low-income residents and creates local jobs.

Buildings offer one of the best opportunities to almost completely eliminate GHG emissions, by using clean electricity for all building energy needs. This starts with developing renewable energy sources--community solar provides the opportunity to develop significant renewable generation near to Jersey City in the near term, and municipal energy aggregation and continuing to work with the state offer longer term opportunities to clean the grid. While electricity becomes cleaner buildings can begin to transition heating to high-efficiency electric heat pumps. Buildings currently using fuel oil or propane for heating are the best place to start this transition, offering significant cost savings and reducing local air pollution.



ENERGY ACTIONS

| | | | | |
|----------------------------|---------------|-------------------------|--------|------------|
| Co-benefits | Public health | Economic sustainability | Equity | Resilience |
| Emissions reduction | Low | Medium | High | Very high |

| Number | Description | Timeframe | Priority | Emissions Reduction | Co-Benefits |
|--------|--|-----------|----------|---------------------|-------------|
| E-1 | Create a one-year energy task force that will make recommendations on specific energy goals and requirements for commercial, industrial and multifamily buildings. | 1-3 years | High | Facilitative | |

Objective 1 Reduce energy use and carbon emissions in existing homes, multi-family buildings, commercial, and industrial buildings

| | | | | | |
|-----|--|-----------|------|--|--|
| E-2 | Require energy benchmarking for all buildings over 25,000 square feet in 2023, and voluntary benchmarking in 2022. | 1-3 years | High | | |
|-----|--|-----------|------|--|--|

ENERGY ACTIONS



| | | | | |
|----------------------------|---------------|-------------------------|--------|------------|
| Co-benefits | Public health | Economic sustainability | Equity | Resilience |
| Emissions reduction | Low | Medium | High | Very high |

| Number | Description | Timeframe | Priority | Emissions Reduction | Co-Benefits |
|--------|--|-----------|----------|---------------------|-------------|
| E-3 | Pursue legislative action to require all buildings over 25,000 square feet to meet Energy Star certification or meet 20% reduction in carbon emissions by certain trigger events (e.g. time of sale; significant renovations). | 3-5 years | Medium | | |
| E-4 | Ensure that energy efficiency upgrades by landlords do not negatively impact low- and moderate-income tenants. | 1-3 years | Medium | Facilitative | |
| E-5 | Develop a multilingual program to help residents and businesses navigate existing state and utility efficiency incentives and financing opportunities. | 1-3 years | Medium | | |

Objective 2 Reduce energy use and carbon emissions in new homes, multi-family buildings, commercial, and industrial buildings

| | | | | | |
|-----|--|-----------|--------|--------------|--|
| E-6 | Provide training to building inspectors to ensure energy code enforcement. | 1-3 years | Medium | Facilitative | |
| E-7 | By 2022, require all new buildings over 25,000 square feet to be demand response, solar and EV ready. | 1-3 years | High | Facilitative | |
| E-8 | Work with the state to pursue legislative action to require all new buildings over 50,000 square feet to meet net-zero carbon emissions by 2025. | 3-5 years | Medium | | |
| E-9 | By 2022 require all new buildings over 25,000 square feet to utilize their roof for solar panels, a green roof, or a cool roof. | 1-3 years | High | | |

ENERGY ACTIONS



Co-benefits

Public health

Economic sustainability

Equity

Resilience

Emissions reduction

Low

Medium

High

Very high

| Number | Description | Timeframe | Priority | Emissions Reduction | Co-Benefits |
|--|--|------------|----------|---------------------|-------------|
| Objective 3 Improve access to clean and renewable energy | | | | | |
| E-10 | Streamline and clarify the permitting process for building-mounted solar panel systems. | 1-3 years | Medium | | |
| E-11 | Establish a Community Solar program that provides solar power opportunities to renters, low-income homeowners, and others who are not able to install solar panels on their own home. | 3-5 years | High | | |
| E-12 | Explore municipal energy aggregation with the goal of providing 100% clean energy to all Jersey City residents by 2035, and at least 80% renewable energy by 2050. | 3-5 years | Medium | | |
| Objective 4 Expand and/or create training programs to ensure diverse, skilled clean energy work force | | | | | |
| E-13 | Work with contractors, unions, trade schools, and the local community college to develop clean energy workforce opportunities and training programs. | 3-5 years | Medium | Facilitative | |
| Objective 5 Demonstrate efficiency and green building leadership through Jersey City public agencies | | | | | |
| E-14 | Utilize New Jersey Energy Savings Improvement Program (ESIP) and other New Jersey Clean Energy Program incentives to retrofit municipal buildings and park lighting for energy and water efficiency with minimal upfront capital investment. | 3-10 years | High | | |

ENERGY ACTIONS



| | | | | |
|----------------------------|---------------|-------------------------|--------|------------|
| Co-benefits | Public health | Economic sustainability | Equity | Resilience |
| Emissions reduction | Low | Medium | High | Very high |

| Number | Description | Timeframe | Priority | Emissions Reduction | Co-Benefits |
|---|---|------------|----------|---------------------|-------------|
| E-15 | Ensure all municipal construction and contracts meet or exceed the energy and sustainability standards required of private entities and the goals of the <i>Jersey City Climate and Energy Action Plan</i> . | 1-3 years | Low | | |
| E-16 | Require all new construction for municipal buildings to meet consistent energy efficiency standards and require all buildings occupied by municipal operations in a long-term capacity to be Energy star certified. | 1-3 years | Low | | |
| Objective 6 Demonstrate municipal leadership in the production and use of renewable energy | | | | | |
| E-17 | Require 100% clean energy for municipal facilities by 2030. Of this energy mix, at least 50% should be renewable energy by 2025, and at least 80% should be renewable by 2030. | 5-10 years | High | | |
| E-18 | By the end of 2021, complete an assessment of solar generation potential on all municipal properties. | 1-3 years | High | Facilitative | |
| E-19 | Work with NJ Board of Utilities and NJDEP to identify opportunities for micro grids and locating renewable energy with storage at critical facilities beginning in 2022. | 1-5 years | Low | Facilitative | |
| Objective 7 Collaborate with the state to meet the goals in the NJ Energy Master Plan | | | | | |
| E-20 | Encourage the state to implement action items in the NJ Energy Master Plan, including Property-Assessed Clean Energy (PACE) financing, adopting significant renewable energy requirements for utilities, and developing model energy codes. | 3-5 years | Low | | |

IMPLEMENTATION SCHEDULE



Energy Actions Implementation

E1: Create a one-year energy task force

| | |
|---------------------------|--|
| Next steps | <ul style="list-style-type: none"> Identify task force members and convene. |
| Implementation strategies | Policy/Regulation, Partnership and Collaboration |
| Timeframe: | 1-3 years |
| Partners | Sustainability; JC Division of Planning; Engineering, Traffic, and Transportation; Community Organizations; SIDs; JCEDC - Small Business Program; energy technicians; property managers; Jersey City residents; Unions; Developers; BPU - NJCEP; PSE&G |

Objective 1 Reduce energy use and carbon emissions in existing homes, multi-family buildings, commercial, and industrial buildings

E2: Require energy benchmarking for all buildings over 25,000 square feet in 2023, and voluntary benchmarking in 2022.

| | |
|---------------------------|--|
| Next steps | <ul style="list-style-type: none"> Energy Efficiency Task Force will develop details of requirements. |
| Implementation strategies | Policy/Regulation, Partnership & Collaboration |
| Potential funding sources | City Budget, NJ Clean Energy Program, PSE&G |
| Partners | JC Division of Planning; BPU; Urban Land Institute; Institute for Market Transformation |

IMPLEMENTATION SCHEDULE

Energy Actions Implementation

E3: Pursue legislative action to require all buildings over 25,000 feet² to meet Energy Star certification or meet 20% reduction in carbon emissions by certain trigger events.

| | |
|----------------------------------|--|
| Next steps | <ul style="list-style-type: none"> • Energy Efficiency Task Force will develop details of requirements. • Include as part of a potential Planning checklist. • Encourage voluntary action in the private sector through a communications and education strategy that highlights the City’s sustainability efforts. • Work with utility companies to give an incentive for removing oil and propane dependence in existing buildings. |
| Implementation strategies | Policy/Regulation, Education & Awareness |
| Potential funding sources | NJ Clean Energy Program, PSE&G |
| Partners | Sustainability; JC Division of Planning; State - BPU, DCA; unions |

E4: Ensure that energy efficiency upgrades by landlords do not negatively impact low- and moderate-income tenants.

| | |
|----------------------------------|---|
| Next steps | <ul style="list-style-type: none"> • Amend Jersey City’s rent control ordinance with input from tenant representatives and building owners. The ordinance provides that tenants may be surcharged for the cost of capital improvement. Accordingly, the definition of capital costs in the rent control ordinance could be amended to exclude the cost for energy efficiency upgrades or such costs may be capped for the purposes of calculating a surcharge. |
| Implementation strategies | Partnership and Collaboration |
| Timeframe | 1-3 years |
| Partners | Landlord-tenant relations; Sustainability; JC Division of Planning; building owners |

IMPLEMENTATION SCHEDULE

Energy Actions Implementation

E-5: Develop a multilingual program to help residents and businesses navigate existing state and utility efficiency incentives and financing opportunities.

| | |
|----------------------------------|--|
| Next steps | <ul style="list-style-type: none"> • Partner with community organizations, business associations, and faith-based organizations to increase awareness of these programs. • Identify technicians who will conduct energy audits for free for lower income homeowners and renters. |
| Implementation strategies | Education and Awareness; Partnership and Collaboration |
| Timeframe | 1-3 years |
| Partners | Sustainability; JC Division of Planning; NJ Clean Energy Program; PSE&G; Community organizations; SIDs; JCEDC - Small Business Program; neighborhood associations; energy technicians; property managers; Jersey City Free Public Library |

Objective 2

Reduce energy use and carbon emissions in new homes, multi-family buildings, commercial, and industrial buildings

E-6: Provide training to building inspectors to ensure energy code enforcement.

| | |
|----------------------------------|---|
| Next steps | <ul style="list-style-type: none"> • Assess gaps in code enforcement related to energy efficiency. • Identify training opportunities to fill these gaps. • Supply building inspectors with multilingual educational materials about code requirements. |
| Implementation strategies | Education and Awareness; Policy/Regulation |
| Timeframe | 1-3 years |

IMPLEMENTATION SCHEDULE

Energy Actions Implementation

| | |
|--|--|
| Potential funding sources | To Be Determined |
| Partners | City - Construction; State - Department of Community Affairs; Trade schools and higher education |
| E-7: By 2022, require all new buildings over 25,000 ft2 to be demand response, solar and EV ready. | |
| Next steps | <ul style="list-style-type: none"> • Discuss exact legislative language as part of one-year task force. • Potentially include as part of a sustainability checklist in site plan review. |
| Implementation strategies | Policy/Regulation |
| Timeframe | 1-3 years |
| Potential funding sources | N/A |
| Partners | JC Division of Planning; City Council; Urban Land Institute; NJDEP; unions; BPU; PSE&G |
| E-8: Work with the state to pursue legislative action to require all new buildings over 50,000 square feet to meet net-zero carbon emissions by 2025. | |
| Next steps | <ul style="list-style-type: none"> • Discuss exact legislative language as part of one-year task force. • Potentially include as part of a sustainability checklist in site plan review. |
| Implementation strategies | Policy/Regulation |
| Timeframe | 3-5 years |
| Potential funding sources | N/A |
| Partners | JC Division of Planning; ULI |

IMPLEMENTATION SCHEDULE

Energy Actions Implementation

E-9: By 2022 require all new buildings over 25,000 ft² to utilize their roof for solar panels, a green roof, or a cool roof.

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| Next steps | <ul style="list-style-type: none"> • Discuss exact legislative language as part of one-year task force. • Include as part of a sustainability checklist in site plan review. |
| Implementation strategies | Policy/Regulation |
| Timeframe | 1-3 years |
| Potential funding sources | N/A |
| Partners | JC Division of Planning; ULI |

Objective 3 Improve access to clean and renewable energy

E-10: Streamline and clarify the permitting process for building-mounted solar panel systems.

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| Next steps | <ul style="list-style-type: none"> • Work with Building Department to implement recommendations from SolSmart to streamline permitting process. |
| Implementation strategies | Policy/Regulation |
| Timeframe | 1-3 years |
| Potential funding sources | N/A |
| Partners | Office of the Construction Code Official; Sustainability; SolSmart; NJ Clean Energy Program |

IMPLEMENTATION SCHEDULE

Energy Actions Implementation

| E-11: Establish a Community Solar program | |
|--|---|
| Next steps | <ul style="list-style-type: none">Identify opportunities and locations suitable for community solar. |
| Implementation strategies | Policy/Regulation; Education and Awareness; Partnership and Collaboration |
| Timeframe | 3-5 years |
| Potential funding sources | HUD Community Development Block Grants |
| Partners | Sustainability; JC Division of Planning; private developers (business); housing authorities; community and neighborhood organizations; unions |
| E-12: Explore municipal energy aggregation with the goal of providing 100% clean energy to all Jersey City residents by 2035, and at least 80% renewable energy by 2050. | |
| Next steps | <ul style="list-style-type: none">Conduct research on what this could look like in Jersey City. |
| Implementation strategies | Policy/Regulation |
| Timeframe | 3-5 years |
| Potential funding sources | N/A |
| Partners | Sustainability; Finance; Business Administration |

IMPLEMENTATION SCHEDULE

Energy Actions Implementation

Objective 4 Expand and/or create training programs to ensure diverse, skilled clean energy work force

E-13: Develop clean energy workforce opportunities and training programs.

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| Next steps | <ul style="list-style-type: none"> • Create a stakeholder group that focuses on green job creation. A partnership between the building trades, and sustainability programs at local colleges could help in the development of green jobs and also help to expand support for the City's sustainability goals. |
| Implementation strategies | Policy/Regulation; Education and Awareness; Partnership and Collaboration |
| Timeframe | 3-5 years |
| Potential funding sources | NJBPU |
| Partners | Employment and Training Program; NJEDA; unions; contractors; trade schools; local colleges; Jersey City Free Public Library |

Objective 5 Demonstrate efficiency and green building leadership through Jersey City public agencies

E-14: Utilize New Jersey Energy Savings Improvement Program (ESIP) and other New Jersey Clean Energy Program incentives to retrofit municipal facilities.

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|---------------------------|---|
| Next steps | <ul style="list-style-type: none"> • Continue ESIP project currently underway. |
| Implementation strategies | Policy/Regulation; Partnership and Collaboration |
| Timeframe | 3-10 years |

IMPLEMENTATION SCHEDULE

Energy Actions Implementation

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|---|---|
| Potential funding sources | ESIP, NJCEP |
| Partners | JC Division of Planning; Sustainability; NJ clean energy program; unions |
| E-15: Ensure all municipal construction and contracts meet or exceed the energy and sustainability standards required of private entities and the goals of the Jersey City Climate and Energy Action Plan. | |
| Next steps | <ul style="list-style-type: none">• Work with task force, Business Administration, Div. of Architecture, community organizations and residents to determine best sustainability measures. |
| Implementation strategies | Policy/Regulation |
| Timeframe | 1-3 years |
| Potential funding sources | N/A |
| Partners | JC Division of Planning; Sustainability; contractors |
| E-16: Require all new construction for municipal buildings to meet consistent energy efficiency standards | |
| Next steps | <ul style="list-style-type: none">• Determine building certification standard - pass legislation. |
| Implementation strategies | Policy/Regulation |
| Timeframe | 1-3 years |
| Potential funding sources | N/A |

IMPLEMENTATION SCHEDULE

Energy Actions Implementation

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| Partners | JC Division of Planning; Sustainability <ul style="list-style-type: none"> • Definition: Municipal buildings are those where the City pays the energy bills. The requirement would not apply to nonprofit partners that receive city funding. |
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Objective 6 Demonstrate municipal leadership in the production and use of renewable energy

E-17: Require 100% clean energy for municipal facilities by 2030

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| Next steps | <ul style="list-style-type: none"> • Work with consultant to identify opportunities and create transition plan. |
| Implementation strategies | Policy/Regulation |
| Timeframe | 5-10 years |
| Potential funding sources | N/A |
| Partners | City Council; JC Division of Planning; contractors; unions |

E-18: By 2021, complete an assessment of solar generation potential on all municipal properties

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|----------------------------------|--|
| Next steps | <ul style="list-style-type: none"> • Continue assessment of solar generation potential as part of ESIP process. |
| Implementation strategies | Policy/Regulation |
| Timeframe | 1-3 years |
| Potential funding sources | N/A |

IMPLEMENTATION SCHEDULE

Energy Actions Implementation

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|---|---|
| Partners | Sustainability, Engineering; Business Administration |
| E-19: Identify opportunities for micro grids and renewable energy with storage at municipal facilities | |
| Next steps | <ul style="list-style-type: none"> • Conduct research on what this could look like in Jersey City. |
| Implementation strategies | Partnership and Collaboration |
| Timeframe | 1-5 years |
| Potential funding sources | NJBPU, NJDEP |
| Partners | Sustainability; NJBPU; NJDEP; JC Division of Planning |

Objective 7

Collaborate with the state to meet the goals in the NJ Energy Master Plan

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| E-20: Encourage the state to implement action items in the <i>NJ Energy Master Plan</i> | |
| Implementation strategies | Advocacy |
| Timeframe | 3-5 years |
| Potential funding sources | N/A |
| Partners | City; IMT; other municipalities; NJBPU |

The Action Items

TRANSPORTATION



DETAILS OF HIGH PRIORITY TRANSPORTATION AND LAND USE ACTIONS



T&LU-1: Bicycle connectivity

The [Let's Ride JC](#) Bicycle Master Plan, adopted in 2019, establishes the goal to develop a dense network of bikeways that covers more than 50% of the City's street network, and achieve a minimum 3% bicycle mode share for all trips by 2026 (a 400% increase from 2018), with particular attention to increasing bicycle connectivity across high-injury roadways.

The Bicycle Parking Plan chapter of the Bicycle Master Plan calls for an increase in the supply of both short and long-term use bicycle parking options. To improve Jersey City's cycling network, reliable and secure bike parking is needed especially at PATH and Light Rail transit stations and along commercial corridors.

Bicycle infrastructure can be particularly important to frontline communities who may not have access to many forms of transportation due to disability, age, or income. Residents who navigate the City by foot or bicycle may face injuries and deaths from traffic collisions. The City must work with frontline communities to support and expand plans and initiatives that ensure safety and cleanliness of sidewalks and bike lanes, and public transportation waiting areas.

T&LU-2: Implement Vision Zero Plan

Implement traffic calming measures identified in the recently-adopted [Vision Zero Action Plan](#) and the Pedestrian Enhancement Plan, including crosswalk enhancements, neighborhood slow zones, complete street design, and prioritization of major safety engineering projects at locations along high risk corridors.

Making walking safer and more pleasant will increase the number of people choosing this mode over car travel. In addition to reduction in injuries, there are significant health benefits to increased walking.

DETAILS OF HIGH PRIORITY TRANSPORTATION AND LAND USE ACTIONS



T&LU-5: Transit Oriented Development

In some lower-density areas of the city that are not well served by transit, rezoning can be used in conjunction with transit planning to encourage development of mixed-use transit nodes. These will provide access to more amenities within walking and bicycling distance for those neighborhoods, as well as improved transit access. It may be possible to use value capture mechanisms such as tax increment financing in conjunction with rezoning to create funding streams for rail transit expansion.

T&LU-6: Parking Changes

Excess parking takes space that could be used for housing, commercial development or greenspace. In addition, free parking represents a significant subsidy to personal vehicles that must be paid by those traveling by other means. Changes to optimize both where parking is provided, and how it is paid for can result in a more human-friendly urban form, and more efficient transportation system. Jersey City recently completed a city-wide parking study with community input. The recommendations of this study should be implemented quickly to reduce paved space and encourage public transit use where available.



**SURVEY
SAYS!**

“Beyond making it more convenient to use bikes and public transportation, we should actively make it less convenient to drive and park. Remove more on-street parking and remove mandatory parking minimums for new development.”



DETAILS OF HIGH PRIORITY TRANSPORTATION AND LAND USE ACTIONS



T&LU-7: Improvements to Existing Transit

One of the biggest opportunities for increasing transit use and decreasing transportation emissions is to expand transit to areas of the city that are not currently well served. Jersey City will work with NJ Transit and PATH to increase frequency, reliability, and coverage of existing services, such as through establishing new mass transit hubs, expanding the Hudson Bergen Light Rail to Journal Square PATH, and increasing bus frequency. Additional improvements could include adding new lines that connect transit hubs like Secaucus Junction to Jersey City in order to improve transportation within NJ.

Expanded access to transit is also important to addressing mobility equity, providing access to jobs and allowing people to get to doctor's appointments and access grocery stores.

T&LU-9: Electric Buses

The State has set forward a goal for all new New Jersey Transit buses to be zero emissions by 2032. The City will partner with New Jersey Transit to establish a transition plan to convert the bus fleet in Jersey City to 100 percent electric by 2035. In addition to lowering GHG emissions, electric buses mean cleaner air for the people riding them and the neighborhoods they are driving through.



**SURVEY
SAYS!**

"Deploy real-time bus arrival information at every bus stop."

DETAILS OF HIGH PRIORITY TRANSPORTATION AND LAND USE ACTIONS



T&LU-13: Electric Municipal Fleet

Jersey City has already become a leader in electrifying its municipal fleet, with ten percent of new fleet vehicles already going electric. This includes five fully electric garbage trucks - a first for an East Coast city. In addition to lower GHG emissions, the electric vehicles reduce air pollution and bring significant maintenance cost savings for the City. This action will continue this momentum with a goal for all new fleet vehicles to be electric by 2030.

T&LU-20: Increase number of total street trees 20% by

2030. Urban trees provide a variety of benefits: they reduce the urban heat island effect, provide shade that can reduce building energy use, slow stormwater runoff, create a more attractive environment for walking, clean the air, provide aesthetic value and contribute to mental health.

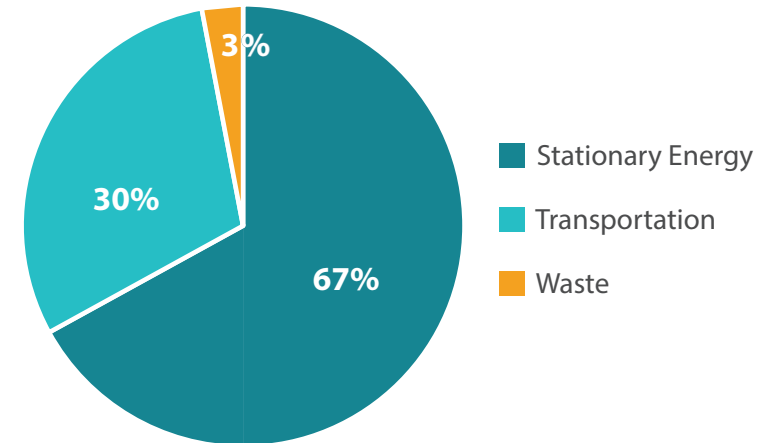
A certain percentage of urban trees succumb to age, disease or injury every year and must be replaced in order to maintain a steady inventory. Unfortunately, for a number of years Jersey City has actually been seeing a net loss in the trees planted along its streets. However the City is finally reversing this trend with over twice as many trees being planted than removed in 2019-2020. In order to reap the many benefits of urban trees, Jersey City should continue ramping up tree plantings with the goal of increasing the total number of street trees by 20% within the next ten years. Tree plantings should be prioritized in neighborhoods with low tree coverage and those disproportionately affected by the urban heat island effect.



TRANSPORTATION AND LAND USE ACTIONS



Transportation accounts for 30% of Jersey City community emissions. A major focus of Jersey City's approach to reducing transportation emissions is to improve opportunities for bicycling, walking and use of transit. While transit use is already relatively high in Jersey City, some parts of the city have limited access to transit. In addition, adding infrastructure for safer and more enjoyable bicycling and walking is a priority. Planning and zoning also presents an opportunity to strengthen mixed use walkable communities, while also increasing tree canopy and green space to increase resilience to heat and flooding events. In addition to the above strategies, Jersey City will promote electrification of municipal, transit, and private vehicles.



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|----------------------------|---------------|-------------------------|--------|------------|
| Co-benefits | Public health | Economic sustainability | Equity | Resilience |
| Emissions reduction | Low | Medium | High | Very high |

| Number | Description | Timeframe | Priority | Emissions Reduction | Co-Benefits |
|---------------------|---|------------|----------|---------------------|-------------|
| Objective 1 | Decrease total per capita vehicle miles traveled (VMT) through urban infrastructure and development choices. | | | | |
| Objective 1a | Expand and improve bicycle and pedestrian facilities, connectivity, convenience, and safety in order to significantly increase the % of trips taken by walking or biking. | | | | |
| T&LU-1 | Implement actions identified in the Let's Ride JC Bicycle Master Plan | 5-10 years | High | | |
| T&LU-2 | Implement Vision Zero Action Plan and Pedestrian Enhancement Plan | 3-5 years | High | | |
| T&LU-3 | Implement a Temporary Street Closure program that restricts vehicular access on certain streets for neighborhood street festivals, periodic open street events on major boulevards, play streets, and/or markets. | 1-3 years | Medium | | |

TRANSPORTATION AND LAND USE ACTIONS



| | | | | |
|----------------------------|---------------|-------------------------|--------|------------|
| Co-benefits | Public health | Economic sustainability | Equity | Resilience |
| Emissions reduction | Low | Medium | High | Very high |

| Number | Description | Timeframe | Priority | Emissions Reduction | Co-Benefits |
|---|---|------------|----------|---------------------|-------------|
| Objective 1b Pursue transit-oriented and mixed-use development that promotes active transportation options and reduces overall carbon emissions. | | | | | |
| T&LU-4 | Rezone for a mix of uses so as to encourage walkable neighborhoods throughout the City. | 5-10 years | Medium | | |
| T&LU-5 | Encourage development of mixed-use transit nodes in under-served, lower-density areas of the City. | 3-10 years | High | | |
| T&LU-6 | Implement recommendations of 2020 Jersey City Parking Management Plan to reduce paved space and encourage public transit use where available. | 1-3 years | High | | |
| Objective 2 Support infrastructure and behavior changes needed to transition to lower carbon transportation choices. | | | | | |
| T&LU-7 | Work with NJ TRANSIT and PATH to increase frequency, reliability, and coverage of existing services. | 3-10 years | High | | |
| T&LU-8 | Explore new and innovative transit for areas of the City that currently have limited transit options. | 3-10 years | Medium | | |
| T&LU-9 | Partner with NJ TRANSIT to convert the bus fleet to 100 percent electric by 2035. | 5-10 years | High | | |
| T&LU-10 | Implement a type of 'rapid bus transit' along key corridors that increases speed for buses through dedicated lanes and signal prioritization. | 3-5 years | Low | | |

TRANSPORTATION AND LAND USE ACTIONS



| | | | | |
|----------------------------|---------------|-------------------------|--------|------------|
| Co-benefits | Public health | Economic sustainability | Equity | Resilience |
| Emissions reduction | Low | Medium | High | Very high |

| Number | Description | Timeframe | Priority | Emissions Reduction | Co-Benefits |
|---------|--|------------|----------|---------------------|-------------|
| T&LU-11 | Develop and implement programs to increase the availability of Electric Vehicle (EV) charging infrastructure throughout the City including lower income communities. | 3-5 years | Medium | | |
| T&LU-12 | By 2030, require 100 percent of all new eligible municipal fleet vehicles to be electric vehicles. | 5-10 years | High | | |
| T&LU-13 | Deploy additional municipal fleet efficiency strategies such as car-pooling software, shared mobility across departments, and remote meetings that reduce the need to drive. | 1-3 years | Low | | |
| T&LU-14 | Continue to expand commute trip reduction programs for city employees including free or subsidized transit passes for employees, and encourage private employers to do the same. | 3-5 years | Low | | |
| T&LU-15 | Explore methods to incentivize businesses to increase telecommuting and transition to a 4-day work week. | 1-3 years | Low | | |
| T&LU-16 | Work with the State to develop an e-mobility program including neighborhood electric vehicle car sharing, e-bikes, and e-scooters. | 3-5 years | Medium | | |
| T&LU-17 | Identify additional multi-modal transportation options to cross the Hudson River, including additional ferry service and an additional bridge that prioritizes buses, walking, and biking. | 5-10 years | Low | | |

TRANSPORTATION AND LAND USE ACTIONS



| | | | | |
|----------------------------|---------------|-------------------------|--------|------------|
| Co-benefits | Public health | Economic sustainability | Equity | Resilience |
| Emissions reduction | Low | Medium | High | Very high |

| Number | Description | Timeframe | Priority | Emissions Reduction | Co-Benefits |
|--|--|------------|----------|---------------------|-------------|
| Objective 3 Decrease emissions from the transportation of goods. | | | | | |
| T&LU-18 | Establish policies to optimize urban freight movement, such as regulating the time of delivery on certain corridors, establishing urban freight consolidation centers, and curbside delivery zones. | 1-3 years | Medium | | |
| Objective 4 Improve carbon capture and reduce heat island effect throughout the city. | | | | | |
| T&LU-19 | Incorporate green infrastructure such as bioswales and street tree plantings into all future right-of-way improvements, and explore "greening" underutilized space, with the goal of converting 15% of existing impervious surfaces to green infrastructure. | 3-10 years | Medium | | |
| T&LU-20 | Increase number of total street trees by 20% by 2030. | 5-10 years | High | | |
| Objective 5 Increase resiliency of City to future storm events and sea level rise. | | | | | |
| T&LU-21 | Expand flood overlay requirements to areas outside of flood zones. | 3-5 years | Medium | | |
| T&LU-22 | Implement recommendations from the Adaptation Master Plan to increase resiliency and utilize green infrastructure to manage stormwater and flooding. | 5-10 years | Medium | | |

IMPLEMENTATION SCHEDULE



Transportation and Land Use Actions Implementation

Objective 1 Decrease total per capita vehicle miles traveled (VMT) through urban infrastructure and development choices.

Objective 1a Expand and improve bicycle and pedestrian facilities, connectivity, convenience, and safety in order to significantly increase the % of trips taken by walking or biking.

T&LU-1: Expand bicycling infrastructure

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| Next steps | <ul style="list-style-type: none">• Give particular attention to increasing bicycle connectivity across high-injury roadways.• Follow Bicycle Master Plan. |
| Implementation strategies | Capital Infrastructure Project |
| Timeframe: | 5-10 years |
| Potential funding sources | NJTPA |
| Partners | Engineering, Traffic & Transportation; JC Division of Planning; CitiBike; Safe Streets JC; Families for Safe Streets |

T&LU-2: Implement Vision Zero Action Plan and Pedestrian Enhancement Plan.

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| Next steps | <ul style="list-style-type: none">• Prioritize major safety engineering projects at locations along high risk corridors. |
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IMPLEMENTATION SCHEDULE

Transportation and Land Use Actions Implementation

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|---------------------------|--|
| Implementation strategies | Capital Infrastructure Project |
| Timeframe | 3-5 years |
| Potential funding sources | NJTPA |
| Partners | Engineering, Traffic & Transportation; Zoning, JC Division of Planning; Safe Streets JC; Families for Safe Streets |

T&LU-3: Implement a temporary street closure program.

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|---------------------------|---|
| Next steps | <ul style="list-style-type: none"> • Discuss opportunities with neighborhood associations and business groups. |
| Implementation strategies | Policy/Regulation; Education and Awareness |
| Timeframe | 1-3 years |
| Potential funding sources | N/A |
| Partners | Engineering, Traffic and Transportation; Special Improvement Districts |

Objective 1b

Pursue transit-oriented and mixed-use development that promotes active transportation options and reduces overall carbon emissions.

T&LU-4: Rezone for a mix of uses so as to encourage walkable neighborhoods throughout the City

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| Next Steps | <ul style="list-style-type: none"> • Align with the master plan update. • Create limited zoning for quality supermarkets restaurants to reduce driving for grocery shopping and reduce food waste. |
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IMPLEMENTATION **SCHEDULE**

Transportation and Land Use Actions Implementation

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| Implementation strategies | Policy/regulation |
| Timeframe | 5-10 years |
| Potential funding sources | N/A |
| Partners | JC Division of Planning |
| T&LU-5: Encourage development of mixed-use transit nodes in under-served, lower-density areas of the City. | |
| Next steps | <ul style="list-style-type: none"> • Conduct density/ affordability analysis around existing transit hubs. • Set up TIF mechanisms. • Re-zone based on Climate and Energy Plan and on Land Use element of the master plan. Not just about higher density but allowing a broader range of uses in residential zones (ex: commercial in the R-1). • Focus on development of new transit nodes in under-served, lower-density areas of the City. |
| Implementation strategies | Capital Infrastructure Project; Policy/Regulation |
| Timeframe | 5-10 years |
| Potential funding sources | NJTPA and value capture mechanisms |
| Partners | JC Division of Planning; Engineering, traffic and transportation; NJ TRANSIT |

IMPLEMENTATION SCHEDULE

Transportation and Land Use Actions Implementation

T&LU-6: Complete city-wide parking study and implement recommendations.

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| Next steps | <ul style="list-style-type: none"> • Base on plan recommendations. |
| Implementation strategies | Policy/regulation |
| Timeframe | 1-3 years |
| Potential funding sources | NJTPA |
| Partners | JC Division of Planning; Engineering, traffic and transportation; JCRA |

Objective 2 Support infrastructure and behavior changes needed to transition to lower carbon transportation choices.

T&LU-7: Work with NJ TRANSIT and PATH to increase frequency, reliability, and coverage of existing services.

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| Next steps | <ul style="list-style-type: none"> • Ensure that there is equitable access to services in disadvantaged neighborhoods while keeping fares low to avoid additional burden on frontline communities. • Work with NJ TRANSIT to add new lines that would improve intercity transit options, such as new lines that connect to transit hubs like Secaucus Junction. |
| Implementation strategies | Capital Infrastructure Project; Policy/Regulation; Partnership and Collaboration |
| Timeframe | 3-10 years |
| Potential funding sources | NJTPA and value capture mechanisms |

IMPLEMENTATION SCHEDULE

Transportation and Land Use Actions Implementation

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| Partners | Engineering, Traffic and Transportation; NJ TRANSIT; NJTPA |
| T&LU-8: Explore new and innovative transit for areas of the city that have limited transit options. | |
| Next steps | <ul style="list-style-type: none"> • Ensure that there is equitable access to services in disadvantaged neighborhoods while keeping fares low to avoid additional burden on frontline communities. • Continue expansion of Via throughout the City. • Research additional opportunities including gondolas. |
| Implementation strategies | Policy/Regulation |
| Timeframe | 3-10 years |
| Potential funding sources | NJTPA and FTA |
| Partners | Engineering, Traffic, and Transportation; Sustainability; JC Division of Planning; NJTPA; Community organizations |
| T&LU-9: Partner with NJ TRANSIT to convert the bus fleet to 100 percent electric by 2035. | |
| Next steps | <ul style="list-style-type: none"> • NJ TRANSIT will prioritize the electrification of its bus fleet in LMI and environmental justice communities. • Work with NJ TRANSIT to identify and overcome obstacles to converting the bus fleet. |
| Implementation strategies | Policy/Regulation; Partnership and Collaboration |
| Timeframe | 5-10 years |
| Potential funding sources | NJTPA and FTA |

IMPLEMENTATION SCHEDULE

Transportation and Land Use Actions Implementation

T&LU-10: Implement 'rapid bus transit' along key corridors .

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|---------------------------|---|
| Next steps | <ul style="list-style-type: none"> • Identify eligible corridors. • Work with state transit agency on implementation. |
| Implementation strategies | Capital infrastructure project |
| Timeframe | 3-5 years |
| Potential funding sources | NJTPA and FTA |
| Partners | Engineering, Traffic and Transportation; JC Division of Planning; NJ TRANSIT |

T&LU-11: Increase the availability of Electric Vehicle (EV) charging infrastructure throughout the City.

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| Next steps | <ul style="list-style-type: none"> • Continue use of NJDEP It Pay\$ To Plug In funding. • Continue to build public EV charging stations. |
| Implementation strategies | Capital Infrastructure Project |
| Timeframe | 3-5 years |
| Potential funding sources | NJTPA and FTA |
| Partners | JC Division of Planning; Engineering, Traffic and Transportation; Sustainability; SIDs; PSE&G; community organizations; NJTPA |

IMPLEMENTATION **SCHEDULE**

Transportation and Land Use Actions Implementation

T&LU-12: By 2030, require 100 percent of all new eligible municipal fleet vehicles to be electric vehicles.

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| Next steps | <ul style="list-style-type: none">• Establish detailed transition plan for achieving this goal. |
| Implementation strategies | Policy/Regulation |
| Timeframe | 5-10 years |
| Potential funding sources | N/A |
| Partners | City Council; Sustainability; Division of Automotive; Business Administration |

T&LU-13: Deploy additional municipal fleet efficiency strategies.

| | |
|----------------------------------|--|
| Next steps | <ul style="list-style-type: none">• Expand fleet carsharing program.• Track fleet usage to identify opportunities for efficiency. |
| Implementation strategies | Policy/Regulation |
| Timeframe | 1-3 years |
| Potential funding sources | NJTPA |
| Partners | Engineering, Traffic and Transportation; Sustainability; all city departments |

IMPLEMENTATION SCHEDULE

Transportation and Land Use Actions Implementation

T&LU-14: Expand commute trip reduction programs for city employees and encourage private employers to do the same.

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| Next steps | <ul style="list-style-type: none">• Offer free or subsidized transit passes for employees.• Expand bicycle parking and facilities. |
| Implementation strategies | Policy/Regulation; Partnership and Collaboration |
| Timeframe | 3-5 years |
| Potential funding sources | NJTPA |
| Partners | JC Human Resources, Engineering, Business Administration |

T&LU-15: Incentivize businesses to increase telecommuting and transition to a 4-day work week.

| | |
|---------------------------|---|
| Next steps | <ul style="list-style-type: none">• Communicate City successes as an example. |
| Implementation strategies | Policy/Regulation |
| Timeframe | 1-3 years |
| Potential funding sources | NA |
| Partners | Sustainability; Business Administration |

T&LU-16: Work with the State to develop an e-mobility program.

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|---------------------------|--|
| Implementation strategies | Policy/Regulation; Partnership and Collaboration |
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IMPLEMENTATION SCHEDULE

Transportation and Land Use Actions Implementation

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|---------------------------|---------------------------------------|
| Timeframe | 1-3 years |
| Potential funding sources | NJTPA and FTA |
| Partners | Transportation; Sustainability; NJTPA |

T&LU-17: Expand ferry service and identify additional multi-modal transportation options to cross the Hudson River.

| | |
|---------------------------|--|
| Next steps | <ul style="list-style-type: none"> • Work with state and regional transit agencies and Hudson County. |
| Implementation strategies | Policy/Regulation |
| Timeframe | 5-10 years |
| Potential funding sources | NJTPA, Port Authority, FTA |
| Partners | Transportation; NJTPA; Port Authority; Hudson County; community organizations |

Objective 3 Decrease emissions from the transportation of goods.

T&LU-18: Establish policies to optimize urban freight movement.

| | |
|---------------------------|--|
| Next steps | <ul style="list-style-type: none"> • Research policy opportunities. |
| Implementation strategies | Policy/Regulation |
| Timeframe & Partners | Not Identified |

IMPLEMENTATION SCHEDULE

Transportation and Land Use Actions Implementation

Objective 4

Improve carbon capture and reduce heat island effect throughout the city

T&LU-19: Incorporate green infrastructure such as bioswales and street tree plantings.

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| Next steps | <ul style="list-style-type: none">• Adopt the model Complete Green Streets Policy. |
| Implementation strategies | Capital Infrastructure Project; Policy/Regulation |
| Timeframe | 3-10 years |
| Potential funding sources | HUD, NJ DEP, NJ Water Bank |
| Partners | JC Division of Planning; community organizations; ULI |

T&LU-20: Increase number of total street trees by 20% by 2030.

| | |
|---------------------------|---|
| Next steps | <ul style="list-style-type: none">• Create a comprehensive street tree inventory.• Update the Urban Forestry Management Plan.• Prioritize low-income, low-canopy locations for tree planting efforts. |
| Implementation strategies | Policy/Regulation |
| Timeframe | 5-10 years |
| Potential funding sources | NJ DEP, NJ Water Bank |

IMPLEMENTATION SCHEDULE

Transportation and Land Use Actions Implementation

Objective 5 Increase resiliency of City to future storm events and sea level rise.

T&LU-21: Expand flood overlay requirements to areas outside of flood zones.

| | |
|----------------------------------|--|
| Next steps | <ul style="list-style-type: none"> Determine timeline and areas of expansion. |
| Implementation strategies | Policy/Regulation |
| Timeframe | 3-5 years |
| Potential funding sources | HUD, NJ DEP, NJ Water Bank |
| Partners | JC Division of Planning; community groups; ULI |

T&LU-22: Implement recommendations from the Adaptation Master Plan to increase resiliency and utilize green infrastructure to manage stormwater and flooding.

| | |
|----------------------------------|---|
| Next steps | <ul style="list-style-type: none"> Work with the NJDEP and Municipal Utilities Authority to ensure that the implementation of the CSO LTCP for Jersey City is aligned with this plan. This could relate to sewer repairs that impact transportation and increasing resiliency of the City to future storm events and sea level rise. Work with the DOT to address flooding issues on State roads in Jersey City. Work with NJ TRANSIT to address flooding issues on land that they own in Jersey City. |
| Implementation strategies | Capital Infrastructure Project |
| Timeframe | 5-10 years |
| Potential funding sources | HUD, NJ DEP, NJ Water Bank |
| Partners | JC Division of Planning |

The Action Items

WASTE

COMPOST DROP-OFF

HOW TO COMPOST IN 3 STEPS - AND - WHAT HAPPENS NEXT

STEP 1
SELECT AN
AIRTIGHT CONTAINER
for approved composting items

STEP 2
COLLECT
FOOD WASTE
Instead of throwing
it in the trash

STEP 3
DROP OFF
FOOD WASTE

WASTE DECOMPOSES
and becomes manure
rich organic material

ORGANIC
MATERIAL
is broken down
into nutrients
for plants

INCLUDE

- Beans
- Bread
- Coffee Grounds
- Eggshells
- Flowers
- Fruits
- Grains
- Pasta
- Rice
- Tea Bags
- Vegetables

EXCLUDE

- Compostable
Plastics (Bags,
Cups, Utensils, Etc.)
- Frozen
Food Boxes
- Human &
Animal Waste
- Liquids
- Meat
- Metal
- Produce Stickers
- Staples In Tea Bags
- Styrofoam
- Waxed Cardboard

COMPOSTABLE BAGS

NO COMPOSTABLE BAGS !!

Compost 101
yes! (no)

Compost 101
no! (yes)



DETAILS OF HIGH PRIORITY WASTE ACTIONS



W-1: Develop Zero Waste Plan

Reducing waste and waste-related emissions starts with understanding the waste currently being generated. The first step is to conduct a comprehensive waste audit to understand current waste practices. The audit will collect information on the types of waste generated, the amount generated from different sources, and how much is currently being recycled or composted.

Building on the data from the waste audit, the Zero Waste Plan will establish citywide aggressive waste reduction targets and strategies for achieving them. The Zero Waste Plan will be developed within two years of Climate and Energy Action Plan adoption.



**SURVEY
SAYS!**

“We need to scale up composting programs both to divert food waste from landfills (less methane) and expand green space so we can build soil to sequester as much carbon as possible.”

DETAILS OF HIGH PRIORITY **WASTE ACTIONS**



W-3: Reuse

Reuse of existing items is the most environmentally friendly approach to waste reduction, avoiding the energy use and emissions needed to manufacture new items. Through this action the City will facilitate material reuse and exchange opportunities throughout the community. This may include pilot programs in under-served communities through libraries, senior centers, and other community hubs. Another aspect is to work with local makers and vocational programs to encourage the development of skills useful for repairing common household goods, or for making use of reused materials. Part of the program may also include setting up spaces where people can drop off, and use/take reusable materials for free, similar to [NYC's stop and swap program](#).

State of Oregon Repair and Reuse Grants

[The Repair and Reuse Grants program](#) operated by the Oregon Department of Environmental Quality provides small grants (usually about \$10,000 each) to small businesses and nonprofits such as clothing and electronics repair, construction materials salvage, and tool lending libraries. Most grants are used for training of new employees to allow business expansion.

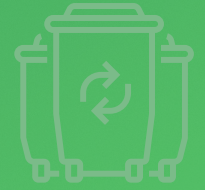


SURVEY SAYS!

"[I]ntroduce regulations [for] mandatory trash sorting at the resident level, and add more community events on recycling. It would help to know how recyclables get processed."



DETAILS OF HIGH PRIORITY **WASTE ACTIONS**



W-7: Recycling Education

Education along with enforcement of existing recycling regulations can ensure all residents have access to recycling, and increase the recycling rate. This will reduce direct landfill emissions by reducing the amount of paper products sent to the landfill, and also reduce upstream emissions from manufacturing and raw materials that go into packaging and other products. Providing recycling bins alongside trash in parks and other public places reinforces a culture of recycling.

W-8: Composting of Business Waste

[The NJ Food Waste Mandate](#) requires businesses generating over one ton of food waste per week to divert that waste to composting by late 2021. This requirement is expected to drive development of new composting sites, which will provide more composting opportunities for all businesses. Jersey City will work with the State to ensure that food waste recycling facilities are located within 25 miles of Jersey City.

However, the state mandate will only directly affect a few businesses within Jersey City. The City will work to extend food waste composting to encompass smaller institutions and businesses within Jersey City by 2025. The city can facilitate connections between waste generating businesses and composters or animal feeding operations that can take the waste.

W-10: Residential Composting

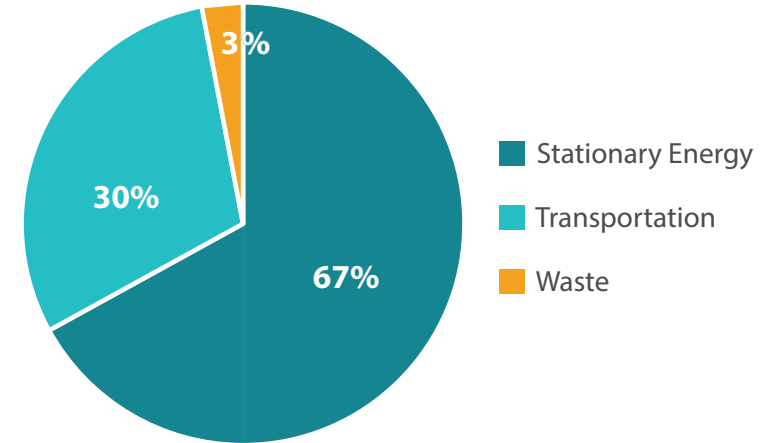
Implement collection of organics (food waste, yard waste) for single-family and multi-family residential properties to compost at least 2000 tons annually within the city within five years. The success of existing food waste drop off locations show that this approach can be effective for diverting food waste to composting. Compost creates nutrient-rich fertilizer that can be distributed to community gardens, neighborhood parks, and street tree beds. The City will significantly expand the number of dropoff locations, making drop off convenient for residents in all parts of the city. At the same time, the City will work with composting operators to develop smaller scale composting operations within the city, rather than relying on transporting compostable materials to larger facilities outside the city.

WASTE ACTIONS



While waste only accounts for 3% of emissions from the 2016 inventory, efforts to reduce waste are important for multiple environmental, health and economic benefits. In addition, recycling, reuse and waste prevention offer opportunities to reduce upstream emissions from the production of goods and food, having an impact larger than the direct waste emissions would imply. Jersey City has the opportunity to start building a circular economy, creating jobs in industries such as composting, repair and reuse to close the loop.

The GHG inventory only includes waste emissions that occur directly at the landfill. The emissions from producing the raw materials and products that ultimately end up in the landfill are larger, but harder to quantify. Efforts to extend the life of products, reduce unnecessary packaging and increase recycling can have emissions benefits larger than would be suggested by the waste portion of the Jersey City GHG inventory. Because these emissions benefits are likely a long distance away where materials are extracted or manufacturing occurs, they are not directly reflected in the community GHG inventory.



| | | | | |
|----------------------------|---------------|-------------------------|--------|------------|
| Co-benefits | Public health | Economic sustainability | Equity | Resilience |
| Emissions reduction | Low | Medium | High | Very high |

| Number | Description | Timeframe | Priority | Emissions Reduction | Co-Benefits |
|--------------------|--|-----------|----------|---------------------|-------------|
| Objective 1 | Adopt a holistic waste management strategy to reduce greenhouse gas emissions from waste produced by municipal operations and the community. | | | | |
| W-1 | Develop a Zero Waste Plan that establishes citywide aggressive waste reduction targets and strategies for achieving them. | 1-3 years | High | Facilitative | |
| W-2 | Expand and improve waste reduction education programs for residents, businesses, schools and institutions. Include education about food waste prevention and donation. | 1-3 years | Medium | | |

WASTE ACTIONS



| | | | | |
|----------------------------|---------------|-------------------------|--------|------------|
| Co-benefits | Public health | Economic sustainability | Equity | Resilience |
| Emissions reduction | Low | Medium | High | Very high |

| Number | Description | Timeframe | Priority | Emissions Reduction | Co-Benefits |
|---|---|------------|----------|---------------------|-------------|
| Objective 2 Reduce waste production through reusing and reducing. | | | | | |
| W-3 | Facilitate material reuse and exchange opportunities throughout the community. | 1-3 years | High | | |
| W-4 | Support and enhance recently-enacted state policies to reduce single-use plastics and other disposable items at Jersey City restaurants and other retail establishments. | 3-5 years | Medium | Facilitative | |
| W-5 | Promote programs designed to advance sustainable business practices, such as the Jersey City Green Business Program and the New Jersey Sustainable Business Registry. | 1-3 years | Medium | Facilitative | |
| W-6 | Institute construction reuse diversion and recycling policy. | 5-10 years | Medium | | |
| Objective 3 Increase residential, commercial, and institutional recycling rates. | | | | | |
| W-7 | Expand recycling education efforts in Jersey City and enforce mandatory recycling for residents and businesses. Within two years ensure all communities in Jersey City have recycling and trash receptacles that are accessible within all neighborhoods and parks. | 1-3 years | High | | |
| W-8 | Expand the NJ Food Waste Mandate to encompass smaller institutions and businesses by 2025. Work with the State to ensure that food waste recycling facilities are located within 25 miles of Jersey City. | 5-10 years | High | | |

WASTE ACTIONS



| | | | | |
|----------------------------|---------------|-------------------------|--------|------------|
| Co-benefits | Public health | Economic sustainability | Equity | Resilience |
| Emissions reduction | Low | Medium | High | Very high |

| Number | Description | Timeframe | Priority | Emissions Reduction | Co-Benefits |
|---|---|------------|----------|---------------------|-------------|
| W-9 | Work with the County and State to provide educational opportunities for City residents disposing of hazardous and problematic items. | 1-3 years | Medium | | |
| W-10 | Expand residential composting opportunities for food waste and yard waste, with a goal to compost 2,000 tons per year within the city by 2025. | 3-5 years | High | | |
| Objective 4 Optimize management of waste generated by municipal facilities | | | | | |
| W-11 | Establish a diversion rate target for solid waste from municipal facilities, based on waste audit of current waste production and disposal practices. | 1-3 years | Medium | Facilitative | |
| W-12 | Develop a plan to implement Environmentally Preferable Purchasing (EPP) practices at the municipal level. | 5-10 years | Low | Facilitative | |
| W-13 | Encourage the State, County, and PVSC to explore biomass resources as a renewable regional energy source. | 5-10 years | Low | | |
| W-14 | Pursue opportunities to reduce water usage and increase efficiency in wastewater treatment. | 5-10 years | Low | | |

IMPLEMENTATION SCHEDULE



Waste Actions Implementation

Objective 1

Adopt a holistic waste management strategy to reduce greenhouse gas emissions from waste produced by municipal operations and the community.

W-1: Develop a Zero Waste Plan that establishes citywide aggressive waste reduction targets and strategies for achieving them

| | |
|---------------------------|---|
| Next steps | <ul style="list-style-type: none">• Allocate resources and generate support for conducting an audit and developing plan |
| Implementation strategies | Policy/Regulation |
| Timeframe | 1-3 years |
| Potential funding sources | City budget |
| Partners | DPW; Sustainability |

W-2: Expand and improve waste reduction education programs.

| | |
|---------------------------|---|
| Next steps | <ul style="list-style-type: none">• Discuss with HCIA about creating a guide outlining waste reduction incentives and programs available to schools.• Promote initiatives that reduce food waste, such as donation and food waste campaigns such as NRDC's Save the Food - link to info on City's involvement with Food Matters and estimated amount of food waste (40,000 tons/year). |
| Implementation strategies | Education and Awareness; Partnership and Collaboration |
| Timeframe | 1-3 years |
| Potential funding sources | NJDEP |
| Partners | DPW; Sustainability; HCIA; Jersey City Public Schools |

IMPLEMENTATION **SCHEDULE**

Waste Actions Implementation

Objective 2 Reduce waste production through reusing and reducing.

W-3: Facilitate material reuse and exchange opportunities throughout the community.

| | |
|---------------------------|---|
| Next steps | <ul style="list-style-type: none"> Set up maker spaces for reusable materials, where people can drop off, and use/take materials for free, based on the NYC Stop and Swap model. |
| Implementation strategies | Policy/Regulation; Partnership and Collaboration; Education and Awareness |
| Timeframe | 1-3 years |
| Potential funding sources | NJDEP |
| Partners | Sustainability, DPW; Jersey City Free Public Library, schools, non-profits, community organizations |

W-4: Develop policies to reduce single-use plastics and other disposable items.

| | |
|---------------------------|--|
| Next steps | <ul style="list-style-type: none"> Partner with the State to provide additional information to food facilities and retail establishments, including education and outreach materials to help meet the requirements of S864. |
| Implementation strategies | Policy/Regulation; Education & Awareness |
| Timeframe | 3-5 years |
| Potential funding sources | N/A |
| Partners | Sustainability; SIDs; local packaging distributors |

IMPLEMENTATION **SCHEDULE**

Waste Actions Implementation

W-5: Promote programs designed to advance sustainable business practices.

| | |
|---------------------------|---|
| Next steps | <ul style="list-style-type: none">• Work to procure incentive funding for small businesses participating in these programs. |
| Implementation strategies | Collaboration & Partnership; Education & Awareness |
| Timeframe | 1-3 years |
| Potential funding sources | To be determined |
| Partners | JCEDC; Sustainability; State; SIDs; Jersey City Free Public Library |

W-6: Institute construction reuse, diversion and recycling policy.

| | |
|---------------------------|--|
| Next steps | <ul style="list-style-type: none">• Use Austin's construction and demolition debris ordinance as a starting point. |
| Implementation strategies | Policy/Regulation; Education & Awareness |
| Timeframe | 5-10 years |
| Potential funding sources | NJDEP |
| Partners | DPW; Construction; Sustainability; NJDEP; private developers; contractors |

IMPLEMENTATION **SCHEDULE**

Waste Actions Implementation

Objective 3 Increase residential, commercial, and institutional recycling rates.

W-7: Expand recycling education efforts in Jersey City and enforce mandatory recycling for residents and businesses.

| | |
|----------------------------------|--|
| Next steps | <ul style="list-style-type: none"> • Explore specific programs such as a recycle coach. • Institute warning system before issuing any fines. • Within the next two years ensure all communities in Jersey City have recycling and trash receptacles that are accessible within all neighborhoods and parks. |
| Implementation strategies | Policy/Regulation; Education & Awareness |
| Timeframe | 1-3 years |
| Potential funding sources | State Recycling Tonnage Grant |
| Partners | DPW; HCIA; Community organizations; SIDS |

W-8: Expand the NJ Food Waste Mandate to encompass smaller institutions and businesses by 2025.

| | |
|----------------------------------|---|
| Next steps | <ul style="list-style-type: none"> • Work with the State to ensure that food waste recycling facilities are located within 25 miles of Jersey City. • Work with community partners and Council to draft legislation that would apply to food facilities in Jersey City. |
| Implementation strategies | Policy/Regulation; Education and Awareness; Collaboration & Partnership |
| Timeframe | 5-10 years |
| Potential funding sources | N/A |
| Partners | DPW; HHS; Sustainability; SIDS; local waste haulers; composting facilities |

IMPLEMENTATION **SCHEDULE**

Waste Actions Implementation

W-9: Work with the County and State to provide educational opportunities for City residents disposing of hazardous and problematic items.

| | |
|---------------------------|---|
| Next steps | <ul style="list-style-type: none"> • Work with HCIA to identify the best way to collect white goods for recycling. • Make information about proper disposal available to all residents. |
| Implementation strategies | Education & Awareness; Partnership & Collaboration |
| Timeframe | 3-5 years |
| Potential funding sources | N/A |
| Partners | DPW; County - HCIA |

W-10: Expand residential composting opportunities for food waste and yard waste.

| | |
|---------------------------|---|
| Next steps | <ul style="list-style-type: none"> • Increase the number of food waste composting drop-off sites. • Work with composting operators to develop small-scale composting locations within the city. • Work towards composting 5% of estimated food waste within the City by 2025. • Consider expansion and promotion of yard waste and leaf collection. |
| Implementation strategies | Policy/Regulation; Education & Awareness |
| Timeframe | 3-5 years |
| Potential funding sources | NJDEP |
| Partners | DPW; HHS; Sustainability; HCIA; SIDS; local waste haulers; composting facilities |

IMPLEMENTATION **SCHEDULE**

Waste Actions Implementation

Objective 4 Optimize management of waste generated by municipal facilities

W-11: Establish a municipal solid waste diversion rate target.

| | |
|---------------------------|--|
| Next steps | <ul style="list-style-type: none"> Based on waste audit of current waste production and disposal practices. |
| Implementation strategies | Policy/Regulation |
| Timeframe | 1-3 years |
| Potential funding sources | N/A |
| Partners | JC DPW; Planning |

W-12: Develop a plan to implement Environmentally Preferable Purchasing (EPP) practices within municipal operations.

| | |
|---------------------------|--|
| Next steps | <ul style="list-style-type: none"> Research the NERC government recycling demand challenge (a commitment to using recycled plastic items as much as possible to help the recycling industry). |
| Implementation strategies | Capital Infrastructure; Policy/Regulation |
| Timeframe | 5-10 years |
| Potential funding sources | N/A |
| Partners | Purchasing; City Council; Buildings & Streets; Sustainability; local government purchasers; ESCOs |

IMPLEMENTATION **SCHEDULE**

Waste Actions Implementation

W-13: Encourage the State, County, and PVSC to explore biomass resources as a renewable regional energy source.

| | |
|---------------------------|---------------------------------------|
| Implementation strategies | Partnership & Collaboration; Advocacy |
| Timeframe | 5-10 years |
| Potential funding sources | N/A |
| Partners | Sustainability |

W-14: Pursue opportunities to reduce water usage and increase efficiency in wastewater treatment.

| | |
|---------------------------|--|
| Next steps | <ul style="list-style-type: none"> • Explore programs to assist homeowners with water conservation and water efficient fixtures. • Consider changing residential rate structures to encourage conservation and reduce burden on low-income customers: <ul style="list-style-type: none"> • Volumetric sewer charges (rather than flat charge) • Reduced reliance on fixed charges • Inclining block rates (rather than uniform or declining block rates) |
| Implementation strategies | Advocacy |
| Timeframe | 5-10 years |
| Potential funding sources | EPA, PVSC, NJ Water Bank, NJDEP |
| Partners | JCMUA; PVSC; Sustainability |

A man in a light-colored jacket and shorts is fishing on a rocky shore. He is holding a fishing rod that is bent, and a fish is hanging from the line. The background shows a body of water and a line of trees with some autumn foliage. The sky is overcast. The entire image has a light teal overlay.

The Path

FORWARD

THE PATH FORWARD



Jersey City has created an ambitious plan to reduce its greenhouse gas emissions. As noted before, community support will be crucial to making these goals a reality. Going forward, Jersey City staff will work with the community to implement all of the actions identified in this plan, with special consideration for the high priority actions listed below:

Energy

1. Establish a one-year energy task force that will make recommendations on specific energy goals and requirements for commercial, industrial, and multi-family buildings.
2. Require energy benchmarking for all buildings over 25,000 square feet in 2023, and voluntary benchmarking in 2022.
3. By 2022, require all new buildings over 25,000 square feet to be demand response, solar and EV ready.
4. By 2022 require all new buildings over 25,000 square feet to utilize their roof for solar panels, a green roof, or a cool roof.
5. Establish a community solar program that provides solar power opportunities to renters, low-income homeowners, and others who are not able to install solar panels on their own home.
6. Utilize NJ Energy Savings Improvement Program (ESIP) and other New Jersey Clean energy Program incentives to retrofit municipal buildings and park lighting for energy and water efficiency with minimal upfront capital investment.
7. Require 100% clean energy for municipal facilities by 2030. Of this energy mix, at least 50% should be renewable energy by 2025, and at least 80% should be renewable by 2030.
8. By the end of 2021, complete an assessment of solar generation potential on municipal properties.



THE PATH FORWARD

Transportation & Land Use

1. Implement actions identified in the Let's Ride JC Bicycle Master Plan.
2. Implement Vision Zero Action Plan and Pedestrian Enhancement Plan.
3. Encourage development of mixed-use transit nodes in under-served, lower-density areas of the City.
4. Implement recommendations of 2020 Jersey City Parking Management Plan to reduce paved space and encourage public transit use where available.
5. Work with NJ Transit and PATH to increase frequency, reliability, and coverage of existing services.
6. Partner with NJ Transit to convert the bus fleet to 100 percent electric by 2035.
7. By 2030, require 100 percent of all new eligible municipal fleet vehicles to be electric vehicles.
8. Increase number of total street trees 20% by 2030.

Waste

1. Develop a Zero Waste Plan that establishes citywide aggressive waste reduction targets and strategies for achieving them.
2. Facilitate material reuse and exchange opportunities throughout the community.
3. Expand recycling education efforts in Jersey City and enforce mandatory

recycling for residents and businesses. Within two years ensure all communities in Jersey City have recycling and trash receptacles that are accessible within all neighborhoods and parks.

4. Expand the NJ Food Waste Mandate to encompass smaller institutions and businesses by 2025. Work with the State to ensure that food waste recycling facilities are located within 25 miles of Jersey City.
5. Expand residential composting opportunities for food waste and yard waste, with a goal to compost 2,000 tons per year within the City by 2025.

A Climate and Energy Action Plan progress report should be completed at least every 2 years. In order to ensure that the climate actions are implemented equitably, the Office of Sustainability will work collaboratively with the Diversity and Inclusion Board to create an Equity Assessment Tool.

Coordination with state and regional initiatives is also important to the success of this plan. Going forward, the City of Jersey City will work with the NJDEP and other state agencies to ensure that implementation of Jersey City's action items align with state plans and policies. The Office of Sustainability will continue participating in ongoing climate initiatives and reporting the city's progress per the guidelines of the Global Covenant of Mayors for Climate and Energy.



A photograph of a woman in a purple top and patterned skirt dancing in a group setting. She is smiling and has her arms raised. The background shows other people, some sitting and some standing, in a bright, outdoor-like environment. The entire image is overlaid with a semi-transparent teal color.

APPENDICES

APPENDIX A: IMPLEMENTATION STRATEGIES

The “implementation strategies” column of the implementation table describes the method(s) by which each action item will be achieved, with five options: policy/regulation, capital infrastructure, advocacy, education and awareness, and partnership and collaboration. In many cases, the action item will require multiple implementation strategies. Below, these strategies are described, and examples of each are listed

1. Policy/regulation: policies and plans implemented by city government
 - a. Management Practice
 - b. Urban Planning
 - c. Incentive
 - d. Vision/Strategy/Roadmap
 - e. Funding
 - f. Zoning
 - g. Ordinance
 - h. Fine
2. Capital Infrastructure: Development of, or changes to, physical structures or systems.
 - a. Road infrastructure
 - b. Construction projects
3. Advocacy: Advocating, as a City, for changes in state level policy that would allow or accelerate strategies to
4. Education & awareness: Development and distribution of informational materials, implementation of education, outreach, or technical assistance programs, or conducting a study.
5. Partnership & collaboration: Building or fostering key partnerships or collaborations
 - a. Local, regional, state agencies
 - b. Community organizations
 - c. Schools and institutions of higher education



APPENDIX B: CO-BENEFITS ASSESSMENT

While action items are primarily intended to decrease greenhouse gas emissions, many of them provide other distinct community benefits as well. We categorized these community co-benefits into four primary types: economic sustainability, environmental quality and public health, equity, and resilience. The framework below describes the questions used to determine whether a given action item provided one of the co-benefits as well.

1. Economic Sustainability

- a. Would this item have a positive impact on local businesses and for residents?
- b. Would this item support growth in green jobs?
- c. Would this improve local workers' skills?

2. Environment Quality and Public Health

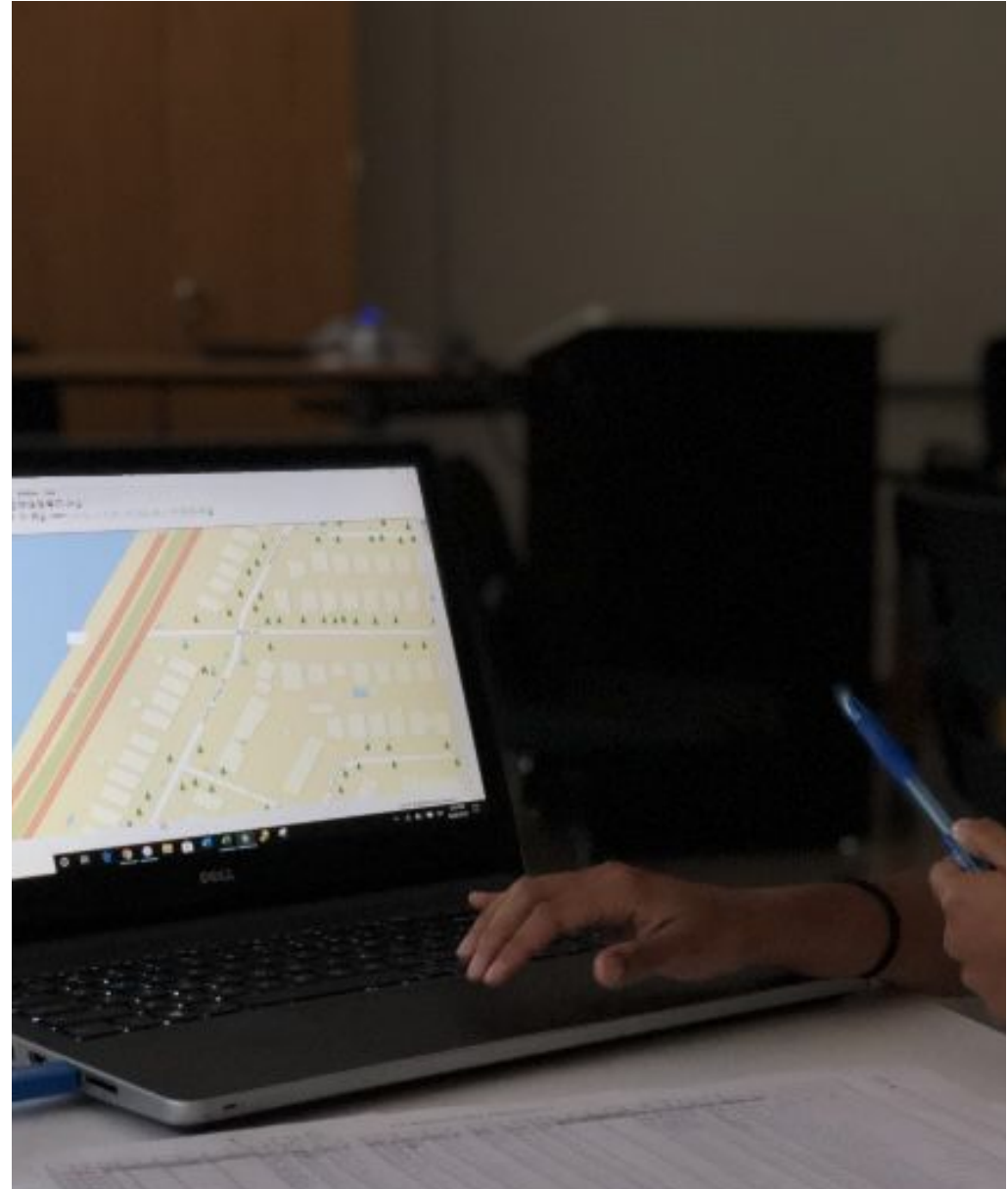
- a. Would this action item improve local environmental quality (e.g. local air pollution)?

3. Equity

- a. Would this action item advance the goal of ameliorating historical injustices against marginalized communities in Jersey City?
- b. Would this action item contribute to minimizing the inequitable distribution of environmental harms, and advancing the equitable distribution of environmental goods (e.g. access to adequate greenspace)?

4. Resilience

- a. Would this item mitigate the risk of property damage to property owners or city infrastructure?



NJCU Tree Mapping of Ward A. Photo credit to **photo contest winner: Katherine Tinoco**

APPENDIX C: GREENHOUSE GAS EMISSION REDUCTION POTENTIAL TIERS

While we do not currently have precise estimates for the greenhouse gas reduction potential of each action item, we were able to categorize them into three tiers: high, moderate, and low reduction potential. This process was informed by several sources of data. We examined three comparable climate action plans that categorized action items based on greenhouse gas-reduction potential, comparing our action items to comparable items in their plans to estimate the relative reductions, and used guidelines provided by ICLEI on high-impact actions to reduce greenhouse gas emissions.

Data Sources:

- Oakland 2030 Equitable Climate Action Plan - [link](#)
- 1.5 degrees C Report aligning New York City with the Paris Climate Agreement - [link](#)
- Ann Arbor A2Zero Climate Action Plan - [link](#)
- USDN high-impact strategies - [link](#)

Note:

Most climate action plans do not include any information on greenhouse gas reduction potential, and only one that we have come across provides numerical estimates (others use ranking systems similar to ours). While we plan on pursuing more exact estimates of reduction potential, such calculations are imprecise and difficult to secure



Lincoln Park Lake. Photo credit to **photo contest winner:**
Neisha Louhar

APPENDIX D: ACTION ITEM PRIORITIZATION PROCESS

Each of the action items were evaluated in order to develop a list of high, medium, and low priority commitments. The items were prioritized based on GHG reduction potential; however, it is important to keep in mind that some items may not produce direct benefits but they often create the foundation needed for other actions (e.g., A waste audit is needed to set a waste diversion target).

1. GHG reduction potential
 - a. Which items are likely to have the greatest impact on GHG emissions?
2. Feasibility (funding, capacity, resources, etc)
 - a. Level of local government control
 - b. Are there political, logistical, or financial obstacles to implementation?
 - c. Cost: Is there sufficient funding to administer these programs?
 - d. How long will it take to implement this item? Short, medium, long
 - e. Does the item support other local, regional, state plans, programs, or initiatives?
3. Co-benefits (see appendix B for details)
 - a. Economic sustainability
 - b. Environment & health
 - c. Equity
 - d. Resiliency

